LESSONS FROM THE PANDEMIC:

Maine's Local Food System during COVID-19 in 2020-21

Maine Farmer, Buyer and Consumer Perceptions of Market Access Changes as a Result of COVID-19

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A Collaboration of:

Maine Organic Farmers and Gardeners

Maine Farmland Trust

Cooperative Development Institute

CEI Coastal Enterprises

Generously Supported By:

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Introduction

Background

In 2021, a collaborative group of food systems organizations, comprising of the Maine Organic Farmers and Gardeners Association, Maine Farmland Trust, Coastal Enterprises Inc., and Cooperative Development Institute, worked together to research and understand the impact of COVID-19 on our food system, and map out a plan for transformational change moving forward.

We knew that COVID-19 had disrupted our food system. A 2020 survey by the Maine Farmer Resource Network showed that 39% of the farms responding had lost direct markets, 29% had lost wholesale markets and 6% had lost institutional markets. At the same time, farms were exploring and adding new markets to survive. At least 39% of the respondents had added new online sales platforms, and others added new direct markets (17%), wholesale markets (10%), and collaborative efforts (7%). This didn't necessarily mean that all of these shifts were economically beneficial in the short term. In fact, 46% of farms responding noted a decrease in income by September 2020.

In order to understand which COVID pivots are viable for farms for the future, and to understand how we can build a more equitable and resilient local food system for the long term, we undertook a series of surveys to better understand the way the pandemic has impacted Maine's local food economy, as of spring 2021. Our goal was to identify the challenges that farmers are facing in accessing viable markets for their products, and the factors that may be hindering the growth and resilience of the local food system.

Survey Design Interview Results

In February and March of 2021, prior to conducting our surveys, six key informants were interviewed to seek guidance on survey design, including experts in economics and food systems, as well as individuals involved in advocacy for different food sectors (producers and retailers). Informants were asked to share general high-level perceptions about the economic impacts of COVID observed thus far at that point in time, as well as areas of food system vulnerability and resilience. In addition, key informants were asked for input into the research design of this study and ways this work could be generative rather than redundant research. Through these conversations, some relevant reports were also identified as resources for this study.

Informants helped our research team:

- Identify the audience for whom we were conducting the research. Based on their input, we decided to focus on providing a snapshot of the pandemic's impacts that would be readable and useful for a wide audience of food system actors as they make future decisions.
- Make use of other current data sources and reports on consumer and food sector impacts, given the incredible amount of research being done on the pandemic in the Northeast region and beyond.

Informants also helped us shape our research approach and methodologies in several ways:

- Emphasizing the importance of a three-survey approach (farmers, buyers and consumers) with pre-COVID and current experience questions that could be utilized and replicated for future research and long-term analysis.
- Suggesting that we remain mindful of non-responses and underrepresented community voices that would not likely be captured via electronic survey instruments.
- Encouraging us to strategically target buyers to get responses, such as connecting directly with small food stores and food co-op general managers, while also reaching larger buyers by finding one representative with lots of knowledge.

We are grateful to all key informants from the food economic sector who shared valuable insights that helped to shape this study.

Key Findings

Consumer Survey Key Findings

1. **Major trends as a result of COVID-19:**
    - Over half of the consumer respondents intend to continue to utilize shopping options that were created as a result of COVID-19, including purchasing pre-bagged and packaged food items, purchasing food in bulk, and visiting self-serve farms and market stands.
    - 60% of respondents plan to continue prioritizing locally sourced food in 2021, ranking local meat, poultry, vegetables and dairy in the order of importance.
2. **Changes made as a result of COVID-19:**
    - Purchases at supermarkets increased 17% and home food delivery service increased by 72%, while purchases at farmers' markets fell 28% and those at farm stands fell 26%.
    - Overall, monthly household food expenditures decreased by 12% ($84 average per household), and the number of shopping trips to acquire food dropped from 5-10 per month to 2-4 per month.
3. **Underrepresented voices from community leaders highlight tremendous impacts on their communities as a result of COVID-19:**
    - Significant economic and psychological impacts were identified in many socially underrepresented communities (including youth, immigrant/refugee, and Black, Indigenous and people of color, or BIPOC, groups), and the issues caused by COVID-19 cannot be isolated to the food system and will require action and follow-up, not just research, to fully address.
    - The pandemic exacerbated shortages in culturally important foods and exposed issues around access and affordability of fresh and local food.
    - Federal relief efforts were seen as disproportionately awarded to white-led businesses and organizations.
    - Future research methods that involve interviews of underrepresented groups need to better address research fatigue, build trust, and avoid targeting, tokenizing or over-emphasizing the demographics of the community or individuals within it.

Farmer Survey Key Findings

1. Major trends as a result of COVID-19:

- 4% of farm jobs were lost in 2020. Farmers hoped to add back jobs in the 2021 growing season, for an increase of 7% above pre-pandemic numbers.
- Total farm gross sales increased 12% ($483 thousand across the 50 farm respondents), and farmers expected gross sales would increase 8% again in 2021 (estimated $326 thousand across the 50 farm respondents).
- Sales of farm products to other farms more than doubled (from $21 thousand in 2019 to $50 thousand in 2020) — and many farmers who bought from other farmers increased their purchases by 40% (average of $12 thousand increase per farm stand), a level of purchasing that farmers expected to continue in 2021.

2. Threats to business well-being as a result of COVID-19:

- The most common threats were issues relating to farm supplies and inputs, including issues in sourcing, increased expense, and having to purchase new types of supplies and inputs (e.g., personal protective equipment [PPE] and sanitation).
- The second most common threats were increased mental and physical health concerns.

3. Changes made as a result of COVID-19:

- The most common changes that respondents made which they intend to stick with include increasing sanitation and food safety standard operating procedures (SOPs), accessing new markets (retail, wholesale and online markets), scaling up their production and increasing their donation of foods to pantries, gleaners, etc.

4. Immediate concerns relating to the impact of COVID-19:

- The most common immediate concerns were with the stability and availability of needed farm supplies and inputs.
- The second most common concern was regarding personal health/wellness.

5. Desired changes to our food system:

- The most common desired change was for developing more access to grants that make farms better able to avoid, withstand or react to future threats to our food system.
- The second most common desired changes involved farm supplies and inputs, including having more locally based businesses to buy from, having lower prices for farm supplies and inputs, and having a greater diversity of businesses from which to buy.

- The third common desired change was for more opportunities for cooperative marketing approaches among farmers.

Buyer Survey Key Findings

1. **Major trends as a result of COVID-19:**
    - For most buyers, the importance of buying local foods did not change, though an increase in customer demand for local products was experienced by most buyers (55%).
    - There was variation in buyers' ability to successfully acquire as much local food as they wanted, with about 60% of buyers being successful while about 40% were not able to buy as much as they wanted (restaurants in particular).

2. **Threats to business well-being as a result of COVID-19:**
    - The most common threat cited was increased stress levels. Other common threats include dealing with limits on the number of customers allowed into a space, increased costs of PPE and supplies, decreased product availability along with difficulty sourcing food products, and difficulty hiring new staff.

3. **Changes made as a result of COVID-19:**
    - The most common changes made by buyers were in shifts to e-commerce, namely adding/expanding online marketing and adding/expanding social media marketing — almost all who made these changes intend for them to be long term.
    - The second most common changes were in regards to food safety, and include increased sanitation and food handling SOPs, and an increased use of packaged or pre-bagged items.

4. **Immediate concerns relating to the impact of COVID-19:**
    - The top immediate concerns were those regarding employees, including staff safety, lack of an adequate labor pool for hiring, increased expenses for sanitation and SOPs for keeping staff and customers healthy.
    - The second most common immediate concerns were those regarding customers, including consumer sensitivity to prices due to economic hardships caused by the pandemic, fluctuations in consumer demand, and consumer safety.
    - A third immediate concern, shared by almost half of the respondents, was increased competition as pandemic restrictions are relaxed. There is uncertainty as to if and how consumers will shift their buying habits after a return to normalcy.

5. **Desired changes to our food system:**

- The most common desired changes had to do with the supply chain, and include a desire for shorter supply chains, more suppliers of local products, fewer monopolies in the food system, and improvements in technology to allow more efficient ordering and purchasing from multiple, small local suppliers.
- Another desired change, shared by almost half the respondents, was for a qualified labor pool. There is ongoing concern over the lack of an adequate labor pool.

Consumer Survey

Research Methods

A total of 200 adults (over 18 years old) in Maine were surveyed to assess food purchasing trends and preferences for local food before and after the onset of the COVID-19 pandemic. The survey was implemented in partnership with the Atlantic Corporation and Dynata, a global online market research firm, during February and March 2021. Responses were limited to specific quotas for each age group, gender, race and ethnicity to ensure a sample distribution representative of the state's population based on U.S. census data. Respondents were predominantly white (94%, 188 respondents) reflecting Maine demographics. The mean age was 46.77, with 53% of respondents identifying as female. 59% were married or partnered. 69% of respondents considered themselves the primary shopper, while the remaining participants shared the responsibility with another member of their household. 30% of respondents earned less than $35,000 per year and 35% earned greater than $100,000.

The survey included 26 questions, covering socio-demographic information and general pandemic impacts on socioeconomic factors, as well as the effects of COVID-19 on general food consumption habits, including attitudes and preferences for locally sourced foods and various market channels during the pandemic.

Consumer Survey Results

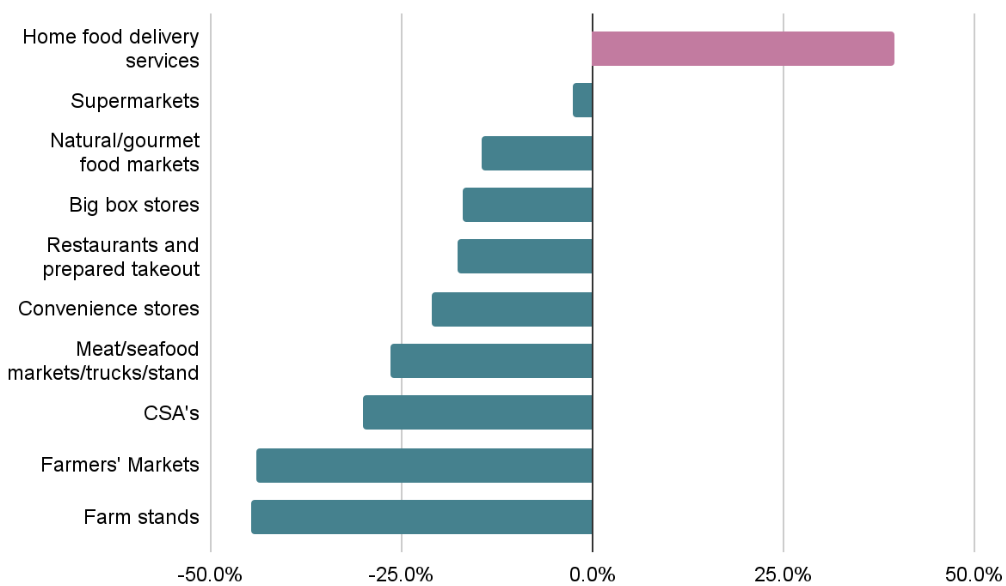
General Economic and Food Purchasing Impacts

- 28% of respondents reported losing their jobs as a result of the pandemic and 44.5% reported losses in household or personal income. This roughly corresponds to national trends; a December 2020 survey of 5,000 households, conducted by

Consumer Food Insights, reported that 22% of respondents had lost jobs since April 2020, and 43% experienced reduced household income since April 2020.

- Overall, monthly household food expenditures decreased after the onset of the pandemic by $84 on average, from $710 per month to an average of $626 . This is similar but slightly steeper than the trend seen in national and government surveys. For example, the Local Food System Response survey from April 2021 found an average drop of $60 in monthly food expenditures.
- Maine consumer respondents also began making fewer shopping trips, with most consumers visiting food stores two to four times per month as opposed to the five to ten trips that consumers averaged pre-pandemic (Fig. 2).
- Shopping frequency and average monthly household food expenditures decreased across almost all market channels. One of the exceptions was for home food delivery services, which saw an increase of almost 40% in shopping frequency and a 71.7% increase in average spending, from $19.78 per month to $33.96 per month (Fig. 1 and Table 1).

Figure 1. Percentage Change in Number of Consumers Regularly Purchasing Food by Market Channel Pre- and Post-Pandemic

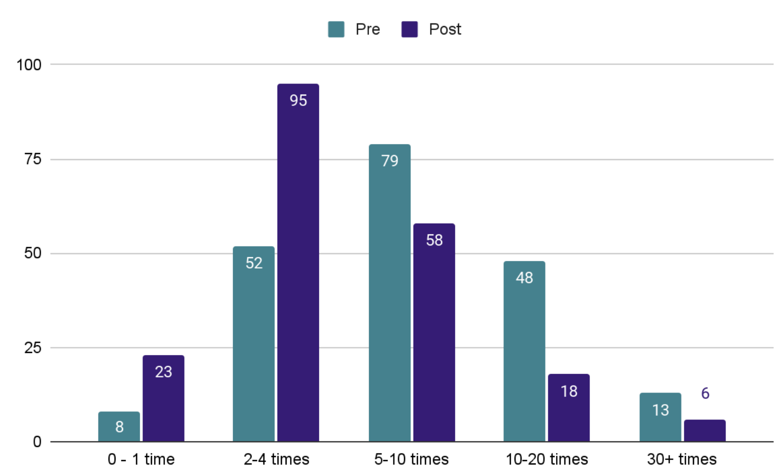


- Supermarket spending increased: while respondents made fewer shopping trips per month after the onset of the pandemic, supermarket spending increased by 16.8% overall, from $241 per month to $282 (Table 1 and Fig. 2).

Table 1. Average (Mean) Monthly Household Expenditure by Market Channel Pre- and Post-Pandemic

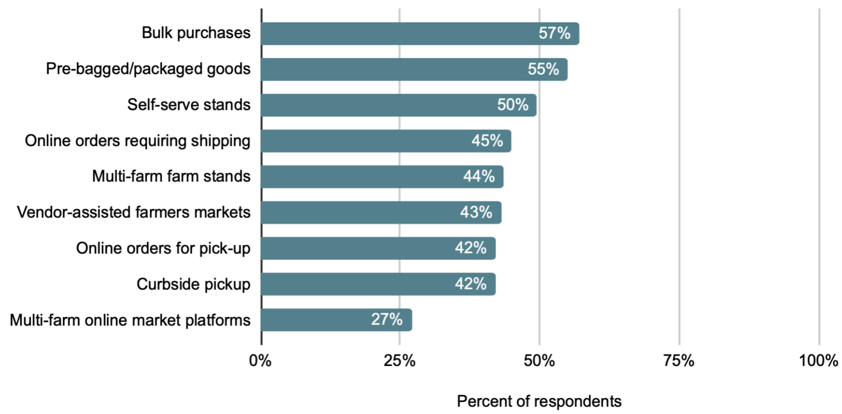
Locations	Pre-pandemic	Post-pandemic
CSA	$20.53	$12.64
Farmers' markets	$32.04	$23.17
Farm stands	$23.53	$17.75
Big box stores	$83.62	$78.95
Supermarkets	$241.35	$281.99
Convenience stores	$51.58	$48.12
Natural/gourmet food stores	$64.47	$31.83
Meat/seafood markets/trucks/stands	$46.06	$30.17
Home food delivery services	$19.78	$33.96
Restaurants and prepared takeout	$127.00	$67.57
Total	**$709.92**	**$626.13**
Note: several outliers were removed from the data to increase the data validity for greater generalizability of the results.		

Figure 2. Frequency of Shopping Trips Pre- and Post-Pandemic



- Almost 60% of respondents intend to continue purchasing pre-bagged/packaged goods and bulk items after the pandemic is over. About half will continue to utilize self-serve market stands (Fig. 3).

Figure 3. Utilization of Various Purchasing Methods Post-Pandemic Once Risk is Significantly Decreased.



- Respondents rated "food availability" highest at supermarkets and big box stores, while at the same time perceived "safety" at supermarkets and big box stores scored among the lowest. But, by and large, respondents seemed to have some safety concerns at most outlets and to perceive food as generally available (Figs. 4 and 5).

FIgure 4. Safety Ratings by Food Shopping Location (1=Most Safe; 7=Least Safe)

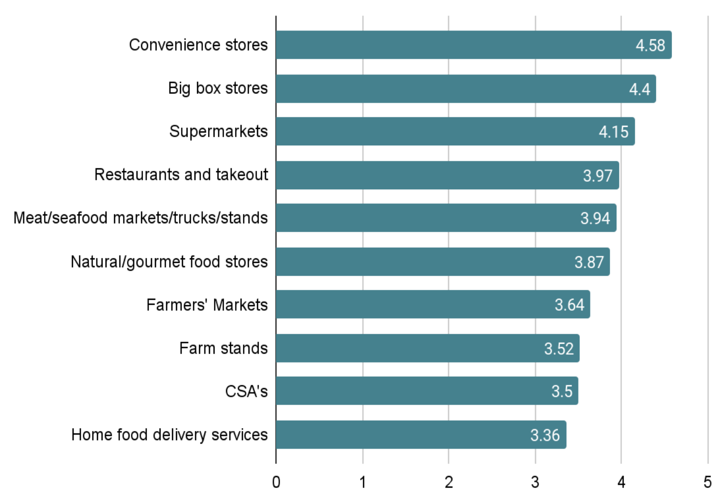
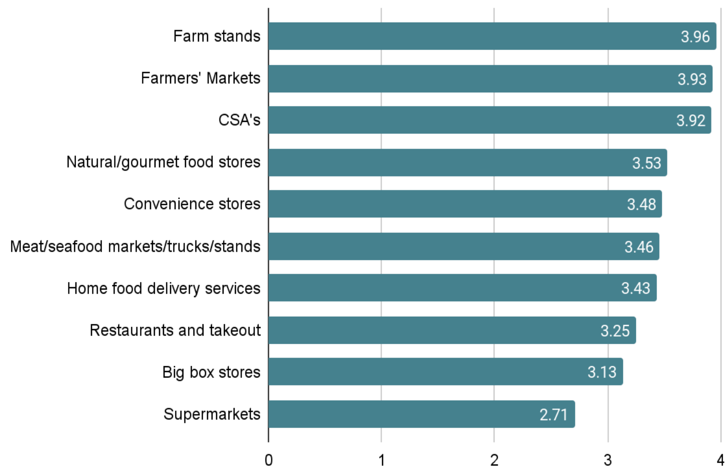


Figure 5. Ratings of Food Product Available by Market Channel (1=Most Available; 7=Least Available)



Local Food Purchasing Impacts

For the purposes of this survey, we defined local food as organic and nonorganic commodities and value-added products grown and/or processed within the state of Maine.

- 60% of our Maine consumer respondents plan to prioritize purchasing locally sourced foods in 2021; yet the importance placed on buying local food did not change with the onset of the pandemic for most respondents. However, an earlier May 2020 survey by Atlantic Corporation found that COVID-19 increased interest in buying local food products for 67% of participants.
- Maine consumers find it most important to purchase locally sourced meat and poultry, followed closely by vegetables and dairy, while purchasing local grains and value-added products did not feel as important.
- Market channels that distribute local goods, like Community Supported Agriculture (CSA) programs, farm stands and farmers' markets, were perceived as slightly safer than most other channels.
- Many new shopping options were offered after the onset of the pandemic to limit COVID-19 transmission, such as bulk purchasing, online orders, self-serve stands and curbside pick-up. We asked respondents whether they would continue using these methods after the risk of contracting COVID-19 has significantly decreased, and over half indicated an interest in continuing to purchase in bulk, buy pre-bagged or packaged goods, and visit self-serve stands.

[Data Dashboard]

Atlantic Corporation created a data dashboard that allows users to explore findings by demographic in detail. The dashboard is available at: atlanticcorporation.com/maine-consumer-dashboard.

Underrepresented Voices: Community Leaders

The goal of this portion of the research was to include the voices and experiences of various underrepresented communities in Maine that may have been overlooked by the survey instruments. Underrepresented groups were identified as immigrant groups, youth groups, low income groups, Black/Indigenous/people of color (BIPOC) groups, and those with disabilities. A full outline of the research approach taken for listening to underrepresented voices can be found in Appendix 4.

In order to learn more about the experiences of underrepresented voices and communities in Maine, a total of 12 key informants were identified and interviewed. Because of their community leadership roles and therefore depth of insight around food needs during the pandemic, we take their views as indicative of common, but not generalizable, experiences across communities. Interviewees self-identified as seven African and/or Arab Immigrant community leaders, two Black/Indigenous/people of color (BIPOC) community leaders, one youth community leader, one leader among those with disabilities, one State Senator, and several who also identified as low-income community leaders. Leaders were asked to discuss their own observations of their communities and their own experiences during the pandemic. Leaders were asked about the impacts of COVID-19, how COVID-19 has changed food shopping habits and food attitudes (particularly around local, bulk and specialty products), and community needs from the food system in Maine moving forward. Results were qualitatively organized into categories with an overview of findings written for each, including verbatim quotes demonstrating key points throughout the findings.

COVID greatly affected communities of color, children, women and low-income communities, both economically and psychologically.

- **African immigrant communities and other communities with strong emphasis on congregation (larger families, practicing religion, and/or living in multi-family units) were affected by the pandemic economically and psychologically.** Namely, childcare demands and the impacts of school closures were a heavy burden for larger families. Community leaders said that already challenging low-wage jobs became more challenging for many as they either lost jobs and income due to childcare demands, or faced disproportionate health risk and threats working front-line service jobs where in-person work is required. The education system, which already caused many challenges for families with language barriers, became overwhelming with school closures, and many people did not have the privilege of, or the technology required for, working from home — many depended solely on the leniency of one's employer. Leaders said that unemployment checks were not regular and not enough to keep current on rent, and many families faced the threat of eviction. Community leaders also shared the difficulty in their abilities to reach everyone within the communities they lead to fully understand the damage.

  > *"Immigrant services that were regularly provided were disrupted and stopped by COVID. We couldn't engage with anyone due to fear of transmission and high level of contagion. Transmission levels at the beginning were high and people were dying, everyone was scared of getting COVID and we didn't yet have a good understanding." Key Informant – Immigrant Community Leader*

  > *"We knew some families with a large number of kids were getting the disease and those were our primary focus — how are they going to get food, we tried to isolate everyone in the home … " Key Informant – Immigrant Community Leader*

  > *"The psychological impact — we are a society where people are intermingling, where people want to be together, talk with each other, so when everyone is isolating in a 10 ft. by 8 ft. room it creates a lot of negativity. So there was a psychological impact along with the economic disruptions." Key Informant – Immigrant Community Leader*

  > *"The biggest barrier is socializing, being together, being with your brother or sister that lives in the community, your cousin that lives a couple blocks away. Those types of links between family members were disrupted." Key Informant – BIPOC Community Leader*

- **Tribal communities in Maine turned inward to their advantage, and "closed off from society early" so as to retain higher levels of safety in larger pods of people.** One key informant also spoke to this strategy as having roots in trauma brought up by the historical context of disease in Indigenous communities.

  > *"The Tribal Government in Maine was quick to close traffic and found safer structures far more quickly." Key Informant – BIPOC Community Leader*

- **Children, women and asylum seekers without work authorization were perceived among the most affected groups in Maine.** Women left the workplace in large numbers, single parents struggled with balancing work and childcare, jobs were often available but there was no one to fill them, and asylum seekers without work permits faced major frustrations around this. In addition, the stress and strain on the children was perceived to have a very long-term, traumatic generational impact.

> *"We saw women drop out of the workforce larger than any other population, and I would say people who were most affected were single, middle-aged mothers in the 'sandwich generation.'" Key Informant – BIPOC Community Leader*

> *"A population that was very affected were asylum seekers who did not have access to federal funds — those who didn't have work authorization were the most affected even though the unemployment rate in Maine was high initially, there were so many vacant positions that if you were an Asylum Seeker with work authorization, you found opportunities ... " Key Informant – BIPOC Community Leader*

> *"Our children — The inconsistency of sleeping habits and stress affects what you eat, and so I worry about our children and their nutritional plan and how it is unsupervised for many. There is no peer pressure or peer education in schools for children to eat healthy. There will likely be a whole generation of kids affected, poor diet, poor exercise and poor mental health, and it will be a generational thing that we have to address, even if the pandemic is over tomorrow, the affects of all that is something we will have to address for a good 5-10 years, especially the young ones." Key Informant – BIPOC Community Leader*

- **Community leaders described how scarcity mindsets around limited resources were exacerbated by the pandemic but also overcome by various collaborative efforts.** Many reported seeing an increase in appetite for bulk purchasing to save on costs, in food drops and volunteer-prepared meal deliveries, in mutual aid networks for facilitating efforts, and in the movement building around Black Lives Matter (BLM).

> *"People want to share to be in solidarity, to help each other, to be united again, to fight what is making life difficult — people being together, fighting together, united together ... People were helping each other. If you aren't working but a family member is working they helped with rent." Key Informant – Immigrant Community Leader*

> *"Collaboration maybe would not have been as possible without COVID — collaboration to help, to education, and nonprofits joining together." Key Informant – Immigrant Community Leader*

> *"Our white representatives of support organizations need to discuss and highlight the relationships and make sure that resources are just flooded in the direction of those who need it." Key Informant – Low-Income Community Leader*

> *"BLM by itself without COVID may not have gotten the racial reckoning it got." Key Informant – BIPOC Community Leader*

<u>COVID emphasized disparities in food access and shopping patterns.</u>

- **Economic and health-related stress pushed many lower-income shoppers further towards big box stores and larger supermarkets** due to concerns over health and exposure, price, and children at home necessitating the most convenient options available. Leaders reported that many lower-income consumers were simply in “survival mode” due to their work, family and overall income.

> *“Basically immigrant community members go to big stores like Walmart, Shaws, to get daily necessities because that is where they can afford — there was not any type of disruption in this [from COVID] because big places always have food, continuously. If a family wanted traditional/specific food they would go to local stores — During Ramadan we purchased meat, rice, and cooked for people who could not afford.” Key Informant – Immigrant Community Leader*

- **COVID exacerbated existing shortages in culturally important food items.** Before the pandemic, many New American community members were driving long distances to get their food needs met. Emergency food efforts acknowledged this growing deficit in culturally important foods, and some food pantries in Maine have begun to take serious strides toward improving access to such foods for those struggling with food insecurity. One respondent stated that there is an ongoing need for more localized efforts at providing culturally appropriate emergency food. One informant said that many immigrant community groups from East or Central Asia, along with many African immigrant groups, did not heavily participate in emergency food efforts ; however, many from Cambodian communities did participate. There were so many small efforts among Ethnic Community Based Organizations (ECBO’s) serving those from Central Africa that one informant felt they were under-coordinated, and resulted in much duplicity in efforts and management. Where efforts were intentionally coordinated (i.e., the Cambodian Association of Maine), many efficiencies were observed as well as the bringing of people together, streamlining of resources, and success in bulk purchasing.

> *“Not all communities have the same food needs. Some of us have to drive to Boston and Montreal to get specific foods that are not here. We have to drive to find special things that we need for children to experience from back home — this is the case in many communities … ” Key Informant – Immigrant Community Leader*

> *“The [food pantry] gave out subgrants and right away we used that $5,000 to buy [specific] food for people who need it most … We asked people if they needed dry food or cooked food. Some people were single men that needed food that was prepared ahead of time. We hired two women to cook in their home and prepare meals and volunteers distributed food all over the place.” Key Informant – Immigrant Community Leader*

> *“We don’t want only certain people getting control over who can distribute, who can share, who can supply. We need some type of equity in distribution, and equity suppliers. Giant [federal] organizations that control all the food are detrimental to all of us … ” Key Informant – Immigrant Community Leader*

> *“It would have been better if groups had been able to come together around similar diets. As it was, if 3 organizations each got a grant, then there were 3 different grants to manage. Instead of it being a regional thing, it became how many ECBOs do we fund — in many ways it could have been more efficient, and bringing in bulk was not as efficient as it could have been.” Key Informant – BIPOC Community Leader*

- **COVID exposed breaks in supply of staple foods and many ill-suited alternatives.** Several key informants said that many people were unaware of how to best prepare, lacked space to stock up, and/or lacked knowledge of product types best suited for emergency reserves. Shelf-stable food items that are also highly nutritious and religiously-appropriate products that contain necessary proteins and fats were in high demand without a lot of clarity on how to find such items. Many shelf-stable items that are more familiar lack nutritional value, so community members had to search extensively to find new products to meet needs.

  > *"Every culture is different. We don't believe in dry food. We need some type of fresh meal, fresh things, fresh meat, but that can't happen all the time. If tomorrow a catastrophe happened here and all the items that we have in the fridge aren't good, we have to have some type of food that will be survivable. Chips? What are we going to do with chips?" Key Informant – Immigrant Community Leader*

  > *"[Our community] didn't know that you need to have a small storage of food in case of something happening. Everyone knows the basic food to nourish themselves — when there is lack of supplies we can momentarily use other things, cans of beans instead of meat, more fiber, use tuna instead of meat but there is not enough tuna — Why have I never thought about using tuna? Because it is not part of my traditional food culture." Key Informant – Immigrant Community Leader*

  > *"We have to educate people that they have to have some type of food at home in case of something happening … Educate people to have some type of water, maybe somewhere in the house where you can have some food in case of emergency. Something that is balanced nutritionally with fats and proteins … that you can store somewhere, and that is non-perishable so people can sustain themselves for a while. And we have to know about it." Key Informant – Immigrant Community Leader*

- **COVID exacerbated existing concerns about the need for fresh *and* affordable products.** Although supermarkets are frequented, they are not widely seen as fresh, according to several key informants, and any local or organic product in the grocery store is seen as overly expensive. There is a lot of confusion raised around U.S. supermarket foods and why they lack freshness. In addition, outdoor markets are familiar, yet often viewed as expensive. Some of the key informants expressed a need for better culturally and linguistically supportive education around the American food system and why it lacks freshness and favors processed foods, as well as better awareness-raising of where both fresh and affordable products can be found using SNAP/EBT benefits.

  > *"There is a bad quality of food in American supermarkets — not fresh. Hannaford and Shaws are expensive compared to food markets [from where I come from] and the bill is 5 times more sometimes with organic foods at these places. We need better education around the American food system and why it is the way it is. We need knowledge of where to use food stamps." Key Informant – Immigrant Community Leader*

  > *"We needed a change in our food system yesterday in order to deal with the uncertainty of our food supply. COVID revealed that the people most susceptible to death were the people with chronic illnesses that come from our food supply as it is currently subsidized*

by the federal government. My concerns about the food system are core, in how it is set up in the first place." Key Informant – State Senator

- **COVID emergency relief was seen as disproportionately awarded to white-led enterprises, and some observed the need for better overall coordination of resources.** Community leaders reported not seeing Black- and/or Immigrant-owned businesses receiving the Economic Injury Disaster Loan (EIDL) or the Paycheck Protection Program (PPP). Many of the resources went to existing, well-resourced organizations instead of the businesses trying to survive and already supplying culturally important food items. Many entrepreneurs were refused loans that for others were eventually forgiven. On top of that, general information about loan opportunities was not perceived as having been widely disseminated. Some informants saw the need for better support around emergency aid opportunities for those with language and/or religious barriers and/or lack of empowerment in navigating complex U.S. financial systems.

  "Small black business owners, black refugee business owners, were not approved for PPP loans. White business owners were getting all those approved PPP loans and business loans. We were not getting them. I have an organization and I didn't get [a PPP loan] even though I applied. It was disproportionate." Key Informant – Immigrant Community Leader

  "The local grocery business, the local tailor, the local businesses, didn't know this information, didn't know that loans were available to them. But those of us who knew and requested loans didn't get anything. The administration didn't give us anything … The bank refused to give us loans. We were disproportionately put aside and this cannot be forgiven." Key Informant – Immigrant Community Leader

  "Many tried to help immigrant and refugee businesses get PPP loans, but many PPP loans were done by businesses who had accountants or a business councilor, and they would need to understand financial and banking processes in order to get access to that. Among the muslim business community, the word 'interest' prevented them from applying [for religious reasons] and they did not understand that interest only kicks in if they violate the rules, otherwise the loans are forgiven." Key Informant – BIPOC Community Leader

  "That is structural racism and how it operates. The resources always go to those who need it the least. The groups of people, the small farmers, the smaller food producers didn't get [the emergency relief]. They didn't have the staff or capacity — there are so many problems with that, and [the federal government] didn't set aside any money for Black folk prior. It is always disproportionate; the people who have the least get the last bite of the apple and this reinforces itself every single time." Key Informant – State Senator

- **The right to food and ability to choose to support local food businesses was greatly challenged during the pandemic.** Overall, food sovereignty and food access have become a top concern and are no longer taken for granted in many communities. There is a hope that the COVID relief resources that arrive are put into community-based solutions that support local food businesses, which would lead to a more affordable and stable food supply.

> *"Everyone was inundated with the need to support local businesses, from restaurants to gyms to nonprofits to food. However, this wasn't always a top priority — people were exhausted and mentally drained — trying to be conscientious during the pandemic was difficult for a lot of people." Key Informant – BIPOC Community Leader*

> *"Food self sufficiency as a right — people are talking about what we never thought we would have to talk about — the right to food. We are always going to have disruptions in our food supply. Grocery stores and shelters are not always stocked in the same way as they were pre-pandemic, and people can see the fragility ... people are not taking the food supply for granted as much as they may have before the pandemic." Key Informant – BIPOC Community Leader*

> *"I hope the money coming through our federal government in response to the pandemic will be invested in food processing infrastructure in the state of Maine and that those investments go to community based solutions. I hope the producers in Maine not connected to big commodity agriculture are going to be able to provide more food choices in communities which will bring the price of food down and increase health and advance the environment, because the less food we eat from away, the better for the all. I hope the industry interests don't win, like they always do, and leave the small food producers, farmers, fisheries, home chefs, we have to make sure our resources are invested in community-based food solutions." Key Informant – BIPOC Community Leader*

The issues caused by COVID-19 and faced by underrepresented groups cannot be isolated to the food system alone, as they are "entangled" issues faced by low-income, BIPOC and/or immigrant communities.

> *"For New Mainers communities there are layers of challenges — always issues with transportation, language, childcare — all entangled — elder care responsibilities on top of that makes time scarce. Our communities reach out to easy choices. These are the side effects of problems that are entangled. There is not a full awareness of the food system issues that make these choices unhealthy." Key Informant – Immigrant Community Leader*

> *"The interplay of racism and the pandemic revealed just how bad structural racism has left it for Black people — particularly indigenous Maine Black people. Ancestors of slavery. In this state, it is pretty alarming. We need to make sure that our communities are not going to be left out. There is an enormous disparity in hungry households as it relates to people of color, but in rural Maine, I see that in all low income and working class people as well — we have not done a good job as the richest country on earth that people have access to nourishing food and it is a problem we must solve. We must recognize the public health emergency that structural racism is and has negatively impacted POC in the state of Maine, and Black people in particular." Key informant – State Senator*

- **Community leaders have expressed the need that community trust must continue to be built on communities' terms**, and that action must be taken in lieu of research to break a perceived trend among community leaders around never seeing actionable results emerge out of research that they have contributed to.

> *"One of the most challenging things right now is for the communities to come anywhere to share their stories. We are asked to tell our story, but always hearing the same thing — nothing changes. People are tired of telling our stories … " Key Informant – Immigrant Community Leader*

We are grateful to all key informants who have shared insights around what many people and communities underrepresented in Maine have experienced as consumers during the pandemic. We also have clearly heard the need for action following research and acknowledge the fatigue faced by underrepresented communities around requests for sharing stories without follow-up or change made. Qualitative approaches need to be generative processes that support trust and relationship building among community leaders and researchers, avoid over-emphasis of racial and other demographic factors, and not target or tokenize any direct community members in ways that contribute to experiences of extractive and disproportionate treatment of communities for the sake of research.

Consumer Survey Key Findings — see page 5

Farmer Survey

Research Methods[1]

A total of 50 farmers responded to a survey targeted to Maine farmers, representing 14 of 16 state counties and an even 50-50 split from farms in state District 1 (Southern Maine) and District 2 (the rest of the state). The farmers' ages ranged from 25 to 65-plus, with no farmers 24 years of age or younger. 51% of farmers identified as female, 91% identified as European or European American, and 6% have served on active duty in the U.S. Armed Forces.

Farmers were asked to indicate their primary and secondary farm enterprises with the ability to select more than one for each category. Overall, vegetables were the most frequently reported primary enterprise, followed by sheep/goats, value-added products, and beef (Fig. 6). Over a third of farmers surveyed were certified organic, and just under 10% were GAP certified (Fig. 7).

The survey was administered between April 24, 2021, and May 14, 2021. It included 23 questions, covering socio-demographic information and the effects of COVID-19 on farm employment, gross sales and market channel participation. The survey asked farmers about threats facing their businesses and changes made to their businesses as a result of COVID-19. It asked farmers about which COVID-19 related resources they utilized and what changes they'd like to see for a more resilient food system.

[1] *Note: Discrepancies between the consumer survey findings and the farmer survey findings, particularly around 2019 v. 2020 comparisons of consumer use of farm stand and CSA market channels, may have occurred due to a combination of factors. For more information, please refer to Appendix 5.*

Figure 6. Primary and Secondary Farm Enterprises

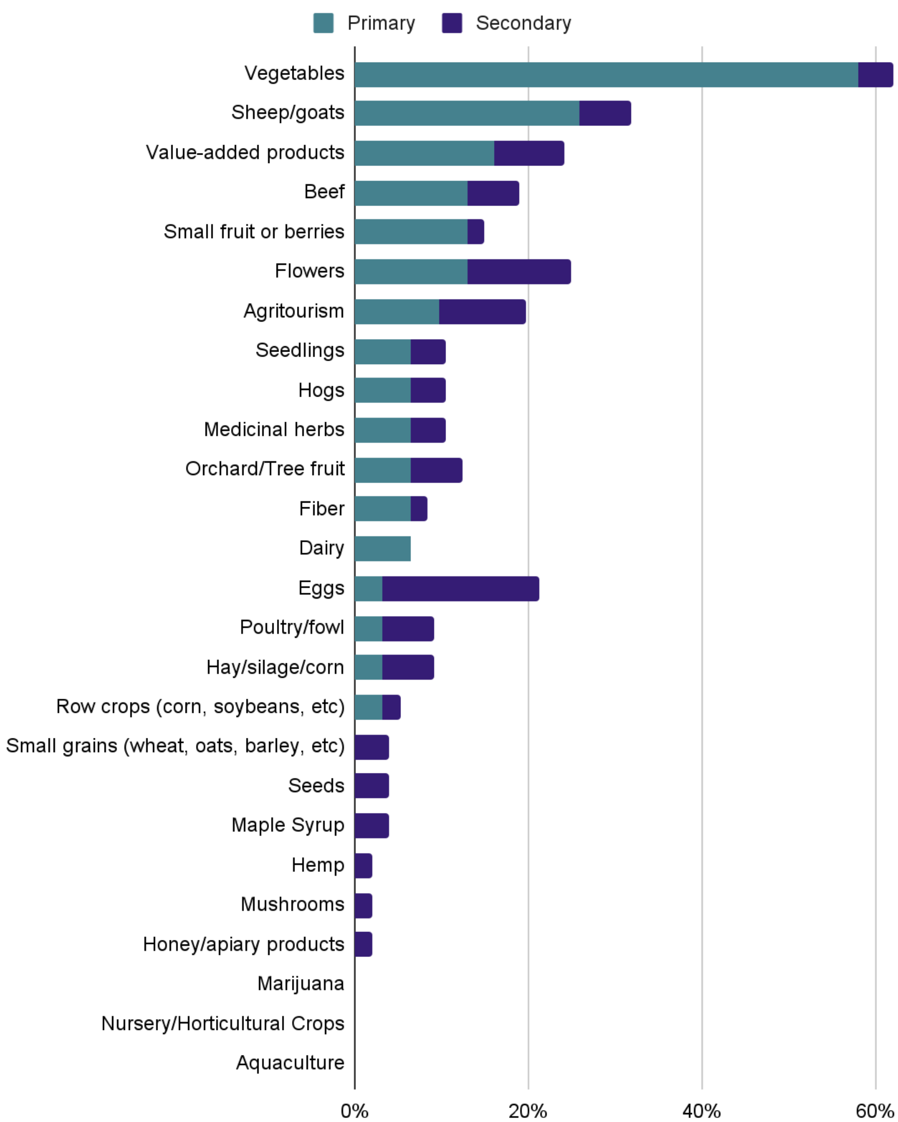
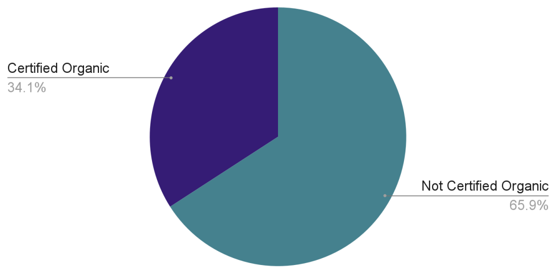
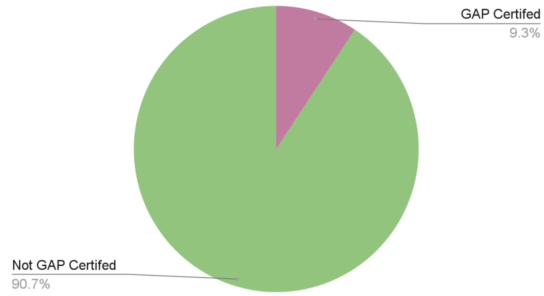


Figure 7. Organic and GAP certification



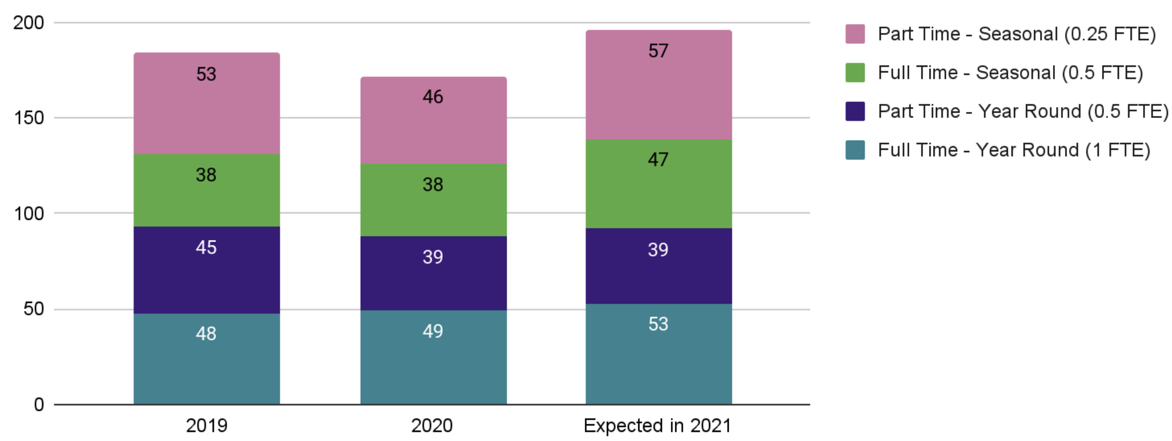


Farmer Survey Results

<u>Jobs</u>

- **Farm jobs were lost, but expected to rebound (more resilient than national trends).** Among respondent farms, approximately 4% of full-time equivalent jobs were lost from 2019 to 2020 (the equivalent of 4 full-time jobs lost across our 50 farm respondents, or 1 job per 12 farms). The job losses were in part-time jobs, both seasonal and year-round. However, as of spring 2021, respondents expected to be able to grow jobs in 2021 by 7% above 2019 figures, and these estimated 2021 increases are expected almost equally to be made in full-time and part-time jobs (Fig. 8). It is the hope of the research team to be able to conduct a similar study in the spring of 2022 to compare farmer expectations with actual labor trends moving forward.

Figure 8: Covid-19 Impact on Jobs



Across the nation, U.S. farms and livestock operations employed **11% fewer workers** during one-week periods in January and April 2021 compared to the comparable weeks in 2020, according to USDA's 2021 annual Farm Labor report.

Gross Sales and Market Channels

- **Gross sales dramatically increased.** Gross sales increased by 14% from 2019 to 2020 despite COVID-19, with visible growth in on-farm sales (increased by 40%), retail stores (increased by 30%), CSAs (increased sixfold, 600%) and distributors (increased by 70%) (Fig. 9). For context, the 2017 Census of Agriculture, which is the most recent agricultural census, showed that from 2012-2017, average market value of agricultural products sold per farm decreased from $93,364 in 2012 to $87,758 in 2017 (a decline of 6%). Consistent with gross sales, the percent of farms participating in these market channels increased (Fig. 10). Online sales and sales to processors increased only slightly (Fig. 10).

- **Farmers predict that participation and sales in certain market channels will decline.** While sales to distributors, retail stores and other farm stands increased with the onset of COVID-19, farmers predict that participation in these channels will return to pre-pandemic levels after the risk of transmission is reduced (Fig. 10).

Those remaining in the retail store market expect their sales will increase (Fig. 9). CSA sales grew the most of any market channel with the onset of COVID-19, and farmers expect that this increase will not fully be sustained; however they do not foresee a drop all the way back to pre-pandemic levels (Fig. 10).

Figure 9: Covid-19 Impacts on Gross Sales

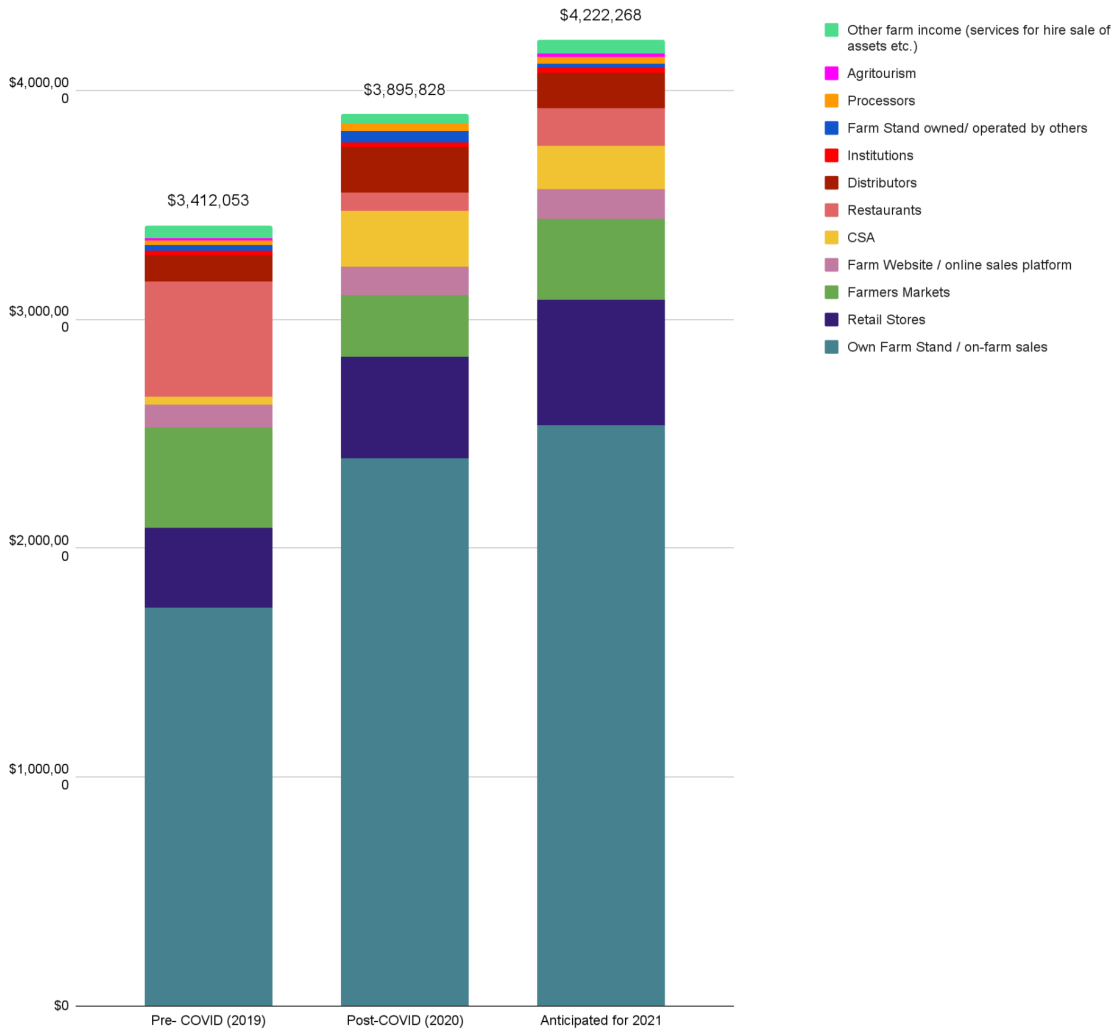
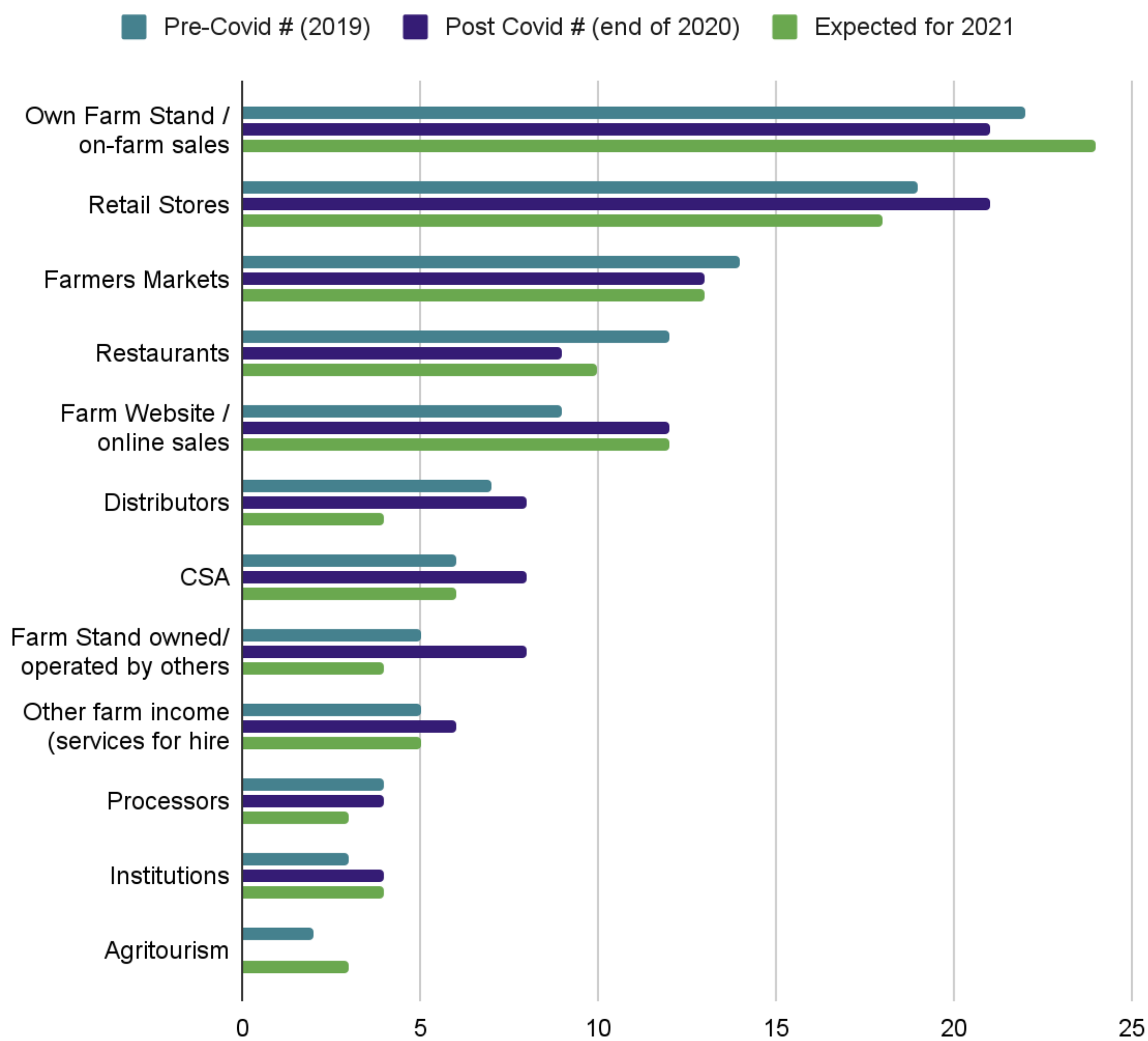


Figure 10: Changes in Number of Farms Participating in Each Market Channel



- **Farmers pivoted away from restaurants, farmers' markets and agritourism.** Markets that declined the most during COVID-19 included restaurant accounts and farmers' markets, in both gross sales and number of market-channel participants (Figs. 9 and 10). Some rebound was expected in 2021, but not to pre-pandemic levels. Agritourism came to a full stop, but is expected to rebound post-pandemic.

- **Farmers joined online market channels, but the proportion of dollars earned online did not change.** Approximately one third of farmers who took the survey utilized online market channels from 2019 to 2020 (Fig. 10). Gross sales increased

25% in this area, growing from an average of $2,000 per farm to $2,500 per farm (Fig. 9). However, looking at their sales as a whole, the percentage of dollars earned online stayed at 3% because gross sales simultaneously increased overall across other market channels (Fig. 11b). Almost all of the farmers who utilized online market channels in 2020 (25% of total respondents) plan to continue using these channels in 2021.

- **Farm stand sales were successful and supported a network of farms supporting other farms.** Farm stand sales amongst respondents increased from 50% of farm gross sales in 2019 to 60% during COVID-19, a change farmers expected to continue in 2021 (Fig. 11a). Farms with retail businesses saw an average increase in gross sales of $26,000 for their own and any bought-in products. Yet, despite this dramatic increase in on-farm sales, the percentage of farms participating in this sales channel declined, indicating that 3% of farmers with on-farm stores stopped selling to the public on their farms during the pandemic (Fig. 9).

  Of related significance, gross sales from farmers selling to other farms' retail businesses (including farm stands) doubled (Fig. 12a). Meanwhile, among the farmer-owned retail businesses (25% of the sample), the value of what they purchased from other farmers increased by 41%, an average increase of $12,000 worth of product per farm stand (Fig. 12b).

  Of those farms who bought in product from other farms for resale, 40% of them increased the number of farmer vendors that supplied their on-farm retail businesses. However, this was not the case for all farms with retail businesses, as 30% purchased from fewer vendors. Regardless of whether the increase in farmstand sales was through adding more vendors or increasing purchasing from fewer vendors, the *increase in sales to other farm's retail businesses was an important way that farmers supported farmers during the pandemic.*

Figure 11a: Market Channels as a Percentage of Gross Sales

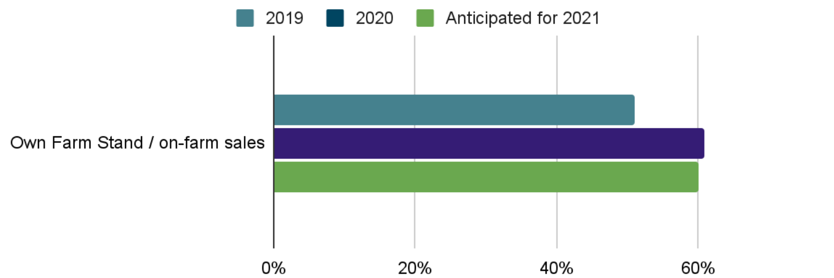


Figure 11b: Market Channels as a Percentage of Gross Sales

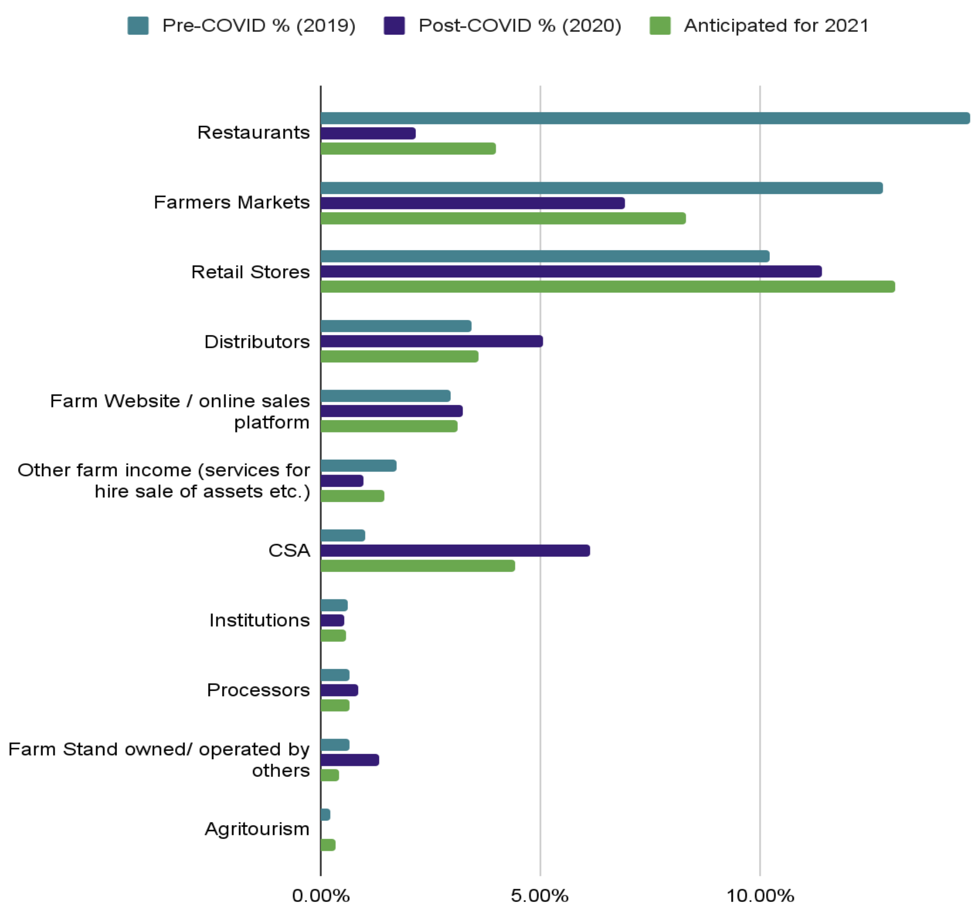


Figure 12a: Total Farm Sales to Other Farms

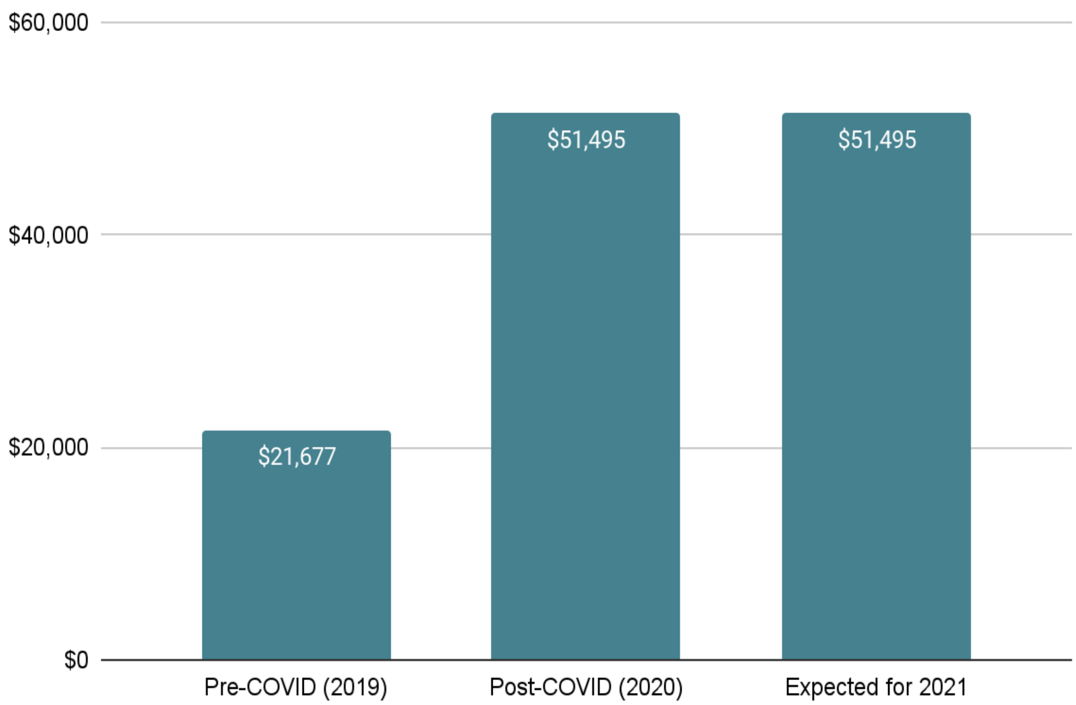
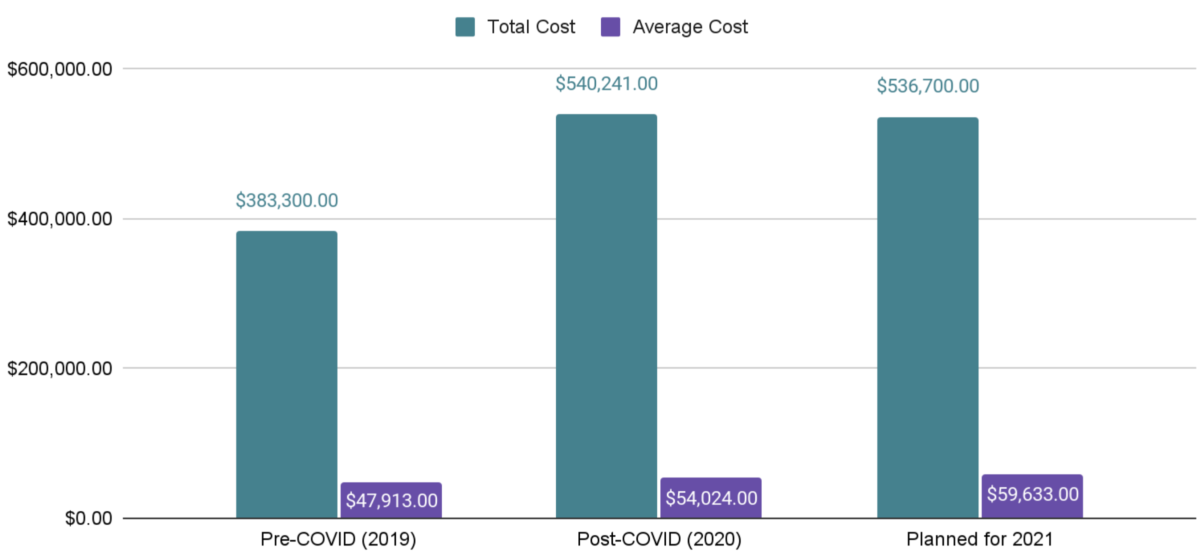


Figure 12b: Total Farm Purchases from Other Farms for Resale



Threats and Immediate Concerns

- **A diversity of threats to the well-being of businesses arose as a result of COVID-19, the most common ones being related to availability, cost and need for new types of farm supplies and inputs (e.g., PPE and sanitation).** The survey invited respondents to identify the overall threats to the well-being of their business that arose during COVID-19. These threats were cross-analyzed by geographical district, and by primary farm enterprises[2] to observe trends. While there was no statistically significant difference by district for any of the threats, we observed that District 2 farmers faced significantly disproportionate threats around physical health (p=0.05, possibly due to age-related factors as the only farmers aged 65-plus were in the 2nd District), the need to purchase PPE inputs, having to cut employees and limitations around processing infrastructure (Fig.13a). In comparing threats by general farm operation type, it can be seen that (Fig. 13b):
    - Significantly more vegetable producers reported that they saw the closing of wholesale markets as a serious threat (p=0.01).
    - Significantly more poultry/egg producers reported struggling with physical health concerns (p=0.01).
    - Poultry/eggs and dairy producers consistently reported seeing significant threats around labor and farm input shortages.
    - Fruit producers reported seeing the greatest threats from closing retail markets.
    - Meat and poultry producers said they faced the greatest threats in increased expenses of inputs.
    - Other producers specializing in less common production, such as fiber, flowers, hay or agrotourism acknowledge reported great threats around mental health concerns, as well as the ability to source inputs.

[2] Primary farm enterprises is a variable that was derived out of another variable to consolidate enterprise options into six categories for greater validity of statistical analysis.

Figure 13a. Threats to Business Well-Being

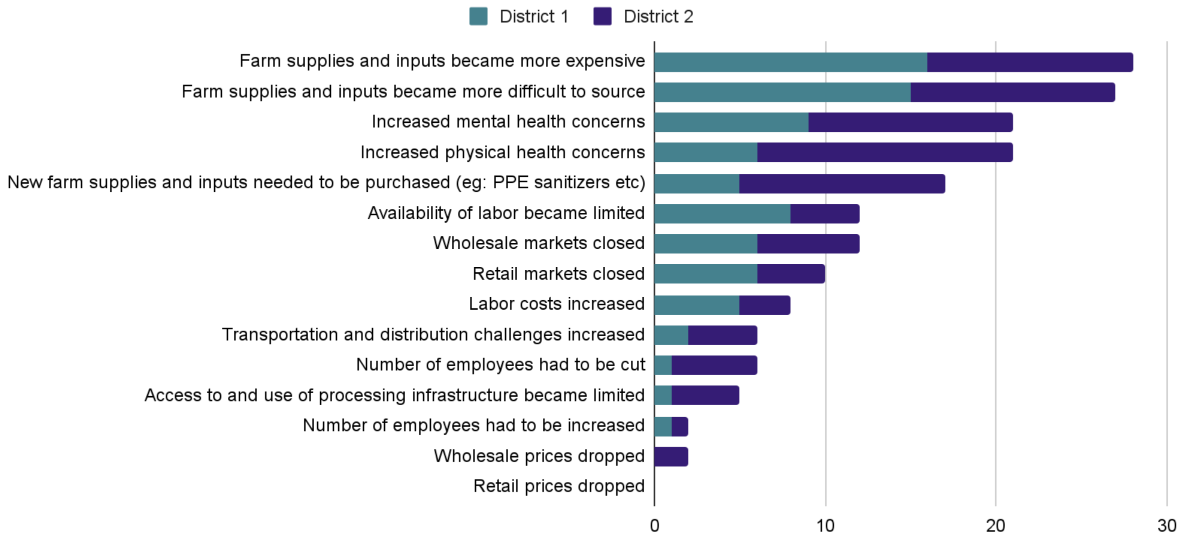
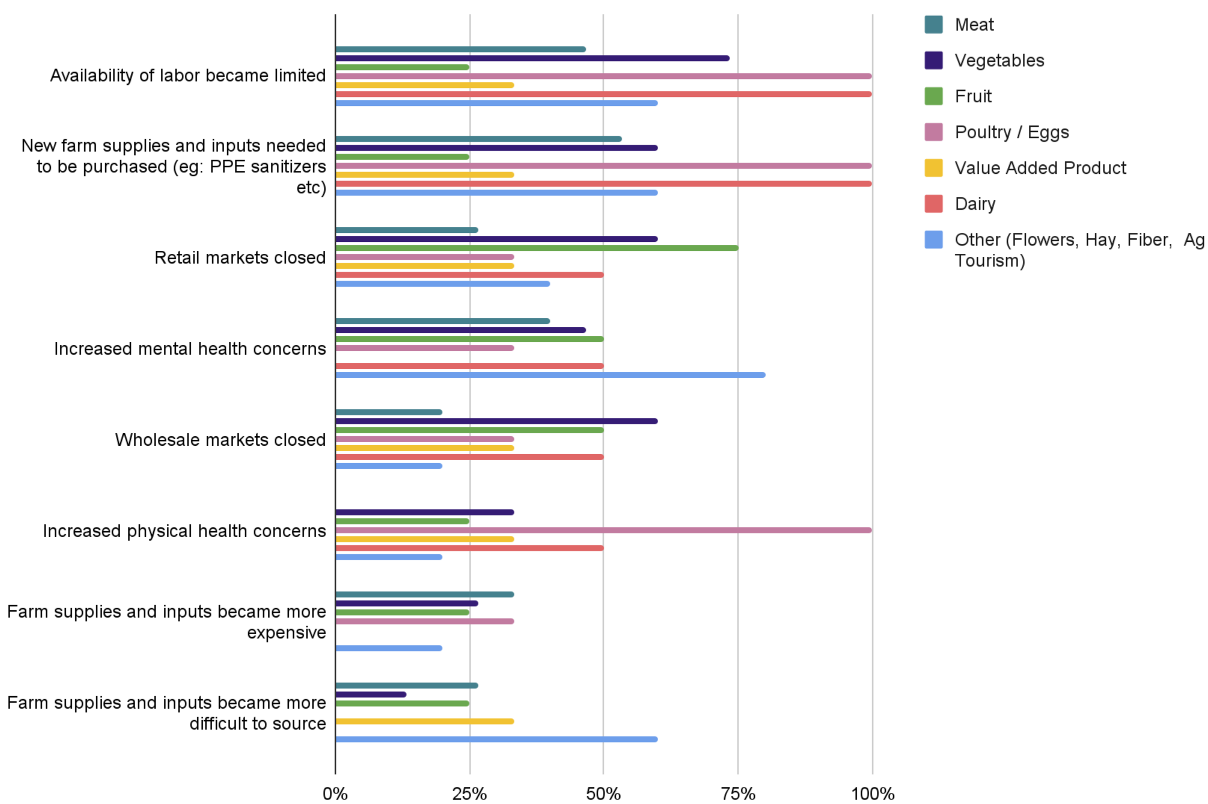
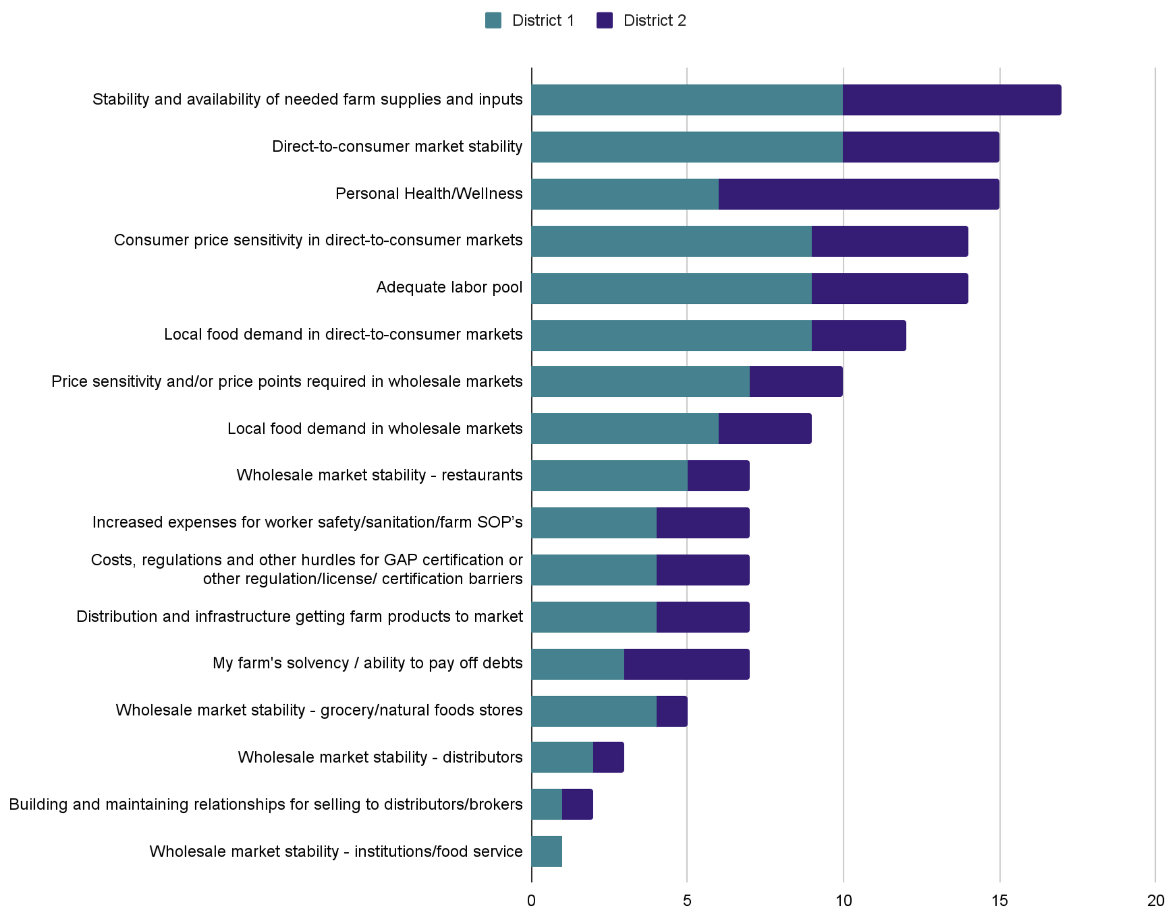


Figure 13b. Threats to Business Well-Being, by Primary Farm Enterprise



- **Immediate concerns focused on the desire for stability in the supply of needed farm supplies and inputs.** Volatility in direct-to-consumer markets also ranked high among respondents, as did concerns over personal health and wellness (Note: District 2 farmers were proportionately more concerned with this than their peers in District 1) (Fig. 14).

Figure 14. Immediate Concerns Relating to the Impact of COVID-19



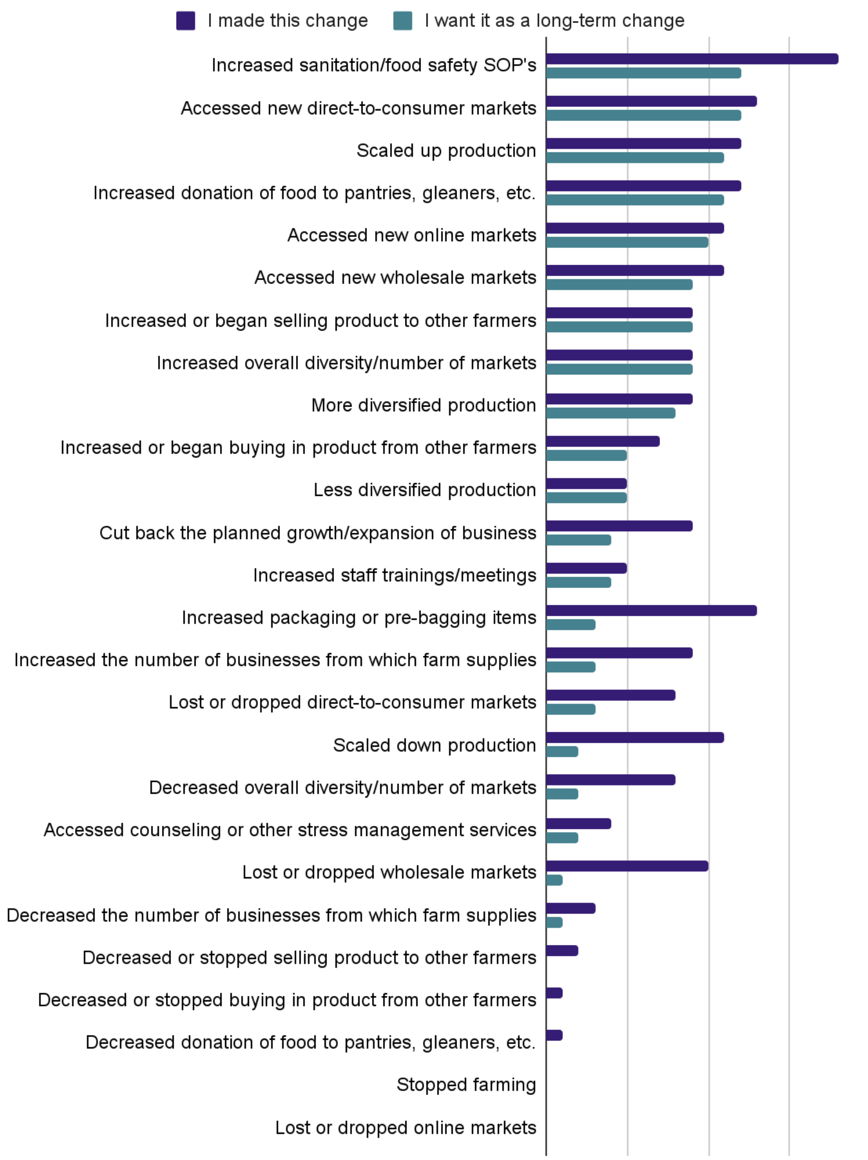
<u>Changes made as a result of COVID-19, and which of them are expected to be long term</u>

- **Over 20% of respondents increased sanitation; accessed new direct-to-consumer, wholesale and online markets; scaled up production; and increased donations — all of these changes farmers generally plan to keep.**

Between 10-15% of farmers also began selling to other farmers and new wholesale accounts, increased/diversified markets and/or production, and bought more from new farmers (Fig. 15).

Activities where farmers made a change, but are less likely to keep the change long term included cutting back on expansion/growth plans or scaling down production, decreased diversity of markets, increased pre-packaged items, increased amount of other farms/businesses they purchased farm inputs from, lost or dropped direct-to-consumer markets, and accessing counseling or stress management services. No farmers reported stopping their farming practice or dropping online markets (Fig. 15).

Figure 15. Changes Made as a result of COVID-19



Future Resilience of the Maine Food System: Farmers' Perspectives

Desired Changes in the Food System

- **Nearly half of farmer respondents said that more access to grants would make them feel more able to avoid, withstand or react to future food system threats (Fig. 16).**
- **Greater diversity of locally based businesses from which to buy farm supplies and inputs at lower costs were named as needed changes.** 40% of farmers said that more local suppliers for farm inputs would support food system resilience, with this response more common among farmers from District 2 in Maine. One third of farmers also pointed to greater diversity of local suppliers of farm inputs, lower farm input prices, more cooperative marketing opportunities, more food storage and food processing infrastructure, and more online direct-to-consumer platforms. District 2 also saw disproportionate emphasis on availability of animal slaughter for meat and processing facilities in alignment with the number and location of the meat producer respondents (Fig. 16).

A closer look was taken at the differences in food system resilience needs by primary farm enterprise type. Dairy producers were significantly more likely to say more access to grants would be supportive than other producer types ($p=0.01$), while fruit producers were significantly more likely to say more local suppliers would make a difference ($p=0.01$). Significantly fewer meat producers said they would like to see lower prices for inputs, while significantly fewer poultry producers said they would like to see more opportunities for cooperative marketing ($p=0.01$). Other comparisons did not have enough responses to run statistics, however trends can be seen in a greater need for shared processing and storage space among fruit and vegetable producers, and the need for greater market outlet diversity and transportation systems for vegetable producers. Producers running niche operations or producing non-food products also had a stronger need for online sales channels and forward contracting than other farm operation types (Fig. 17).

Figure 16: Desired Changes in the Food System By District

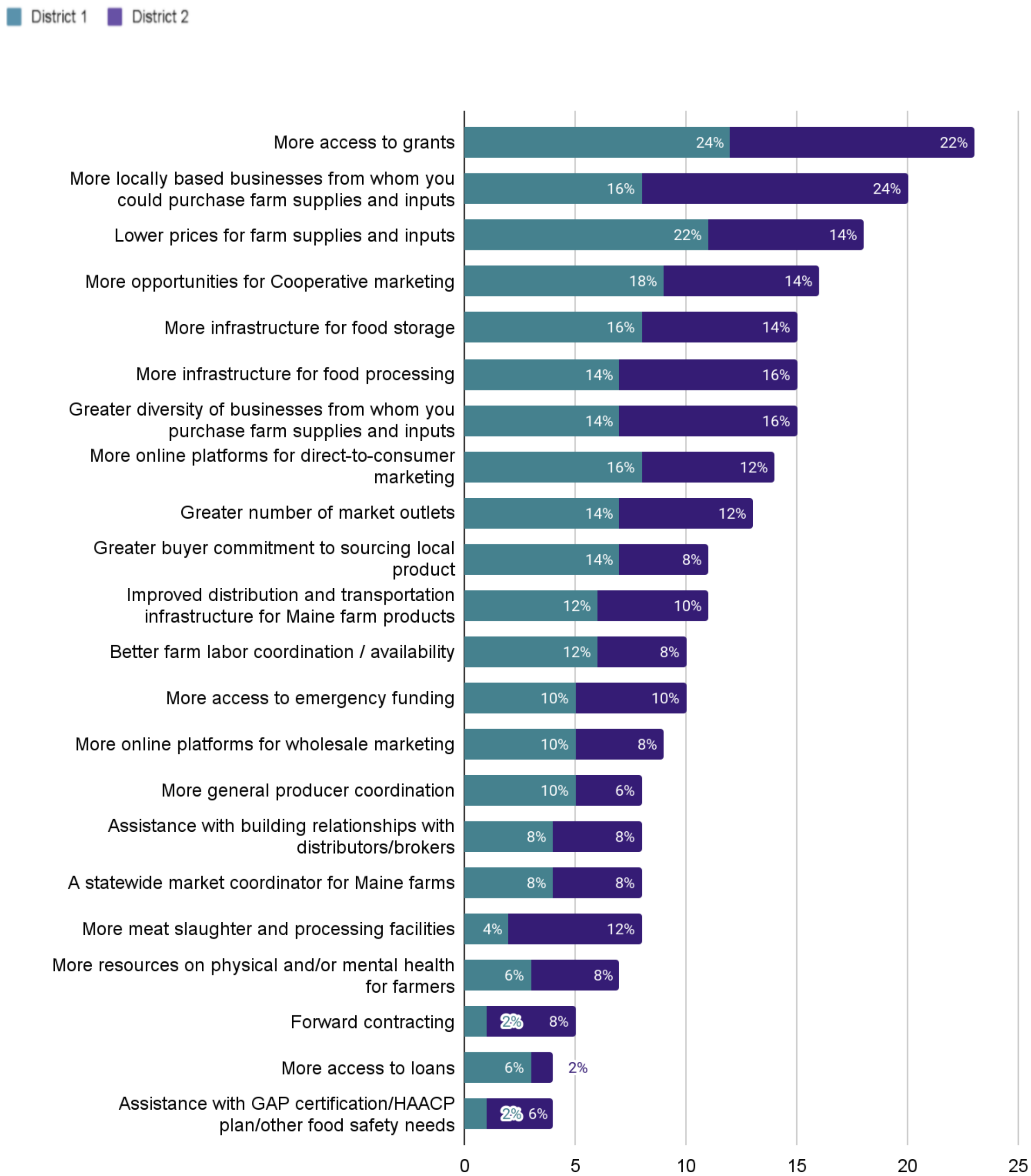
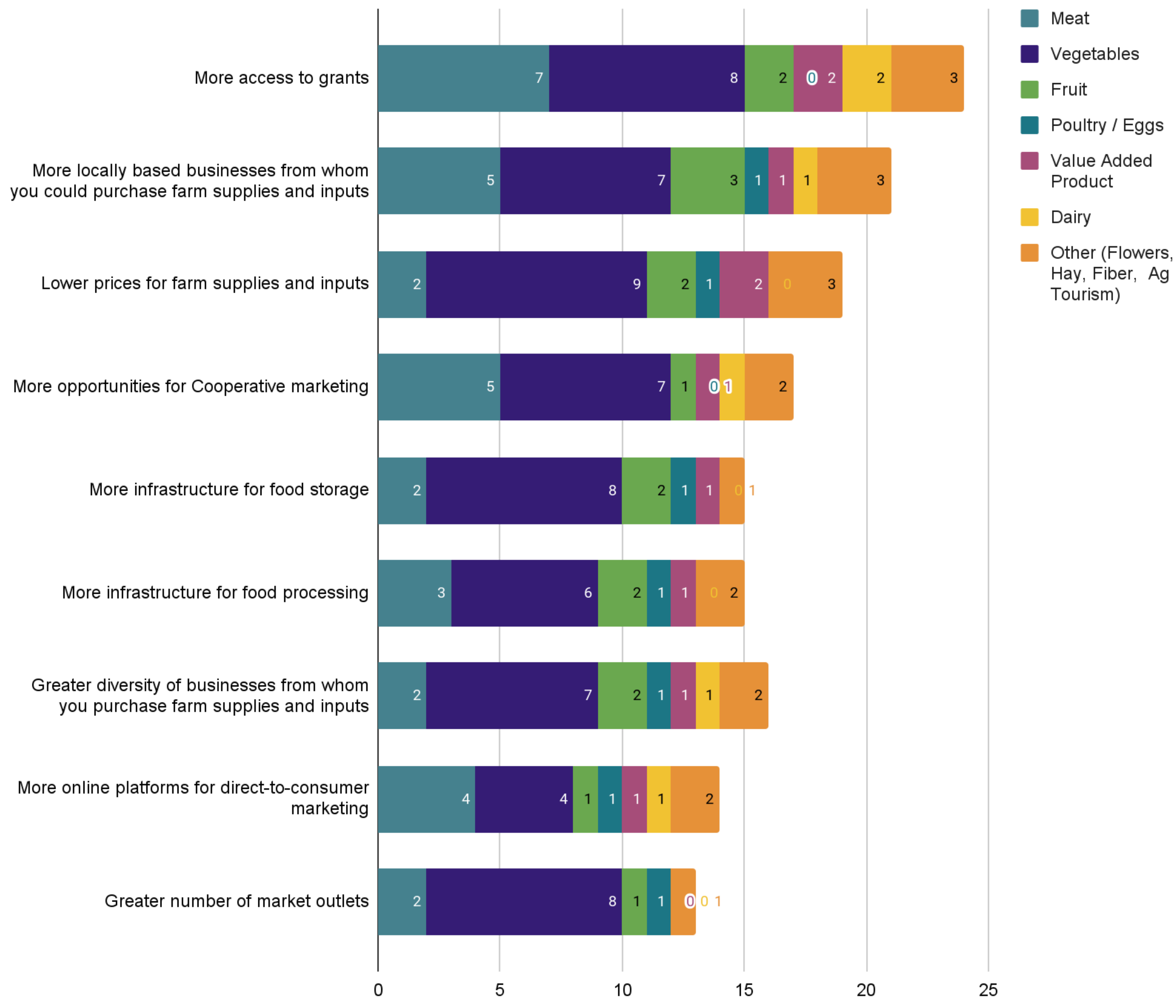

District 1
District 2
More access to grants
24%
22%
More locally based businesses from whom you could purchase farm supplies and inputs
16%
24%
Lower prices for farm supplies and inputs
22%
14%
More opportunities for Cooperative marketing
18%
14%
More infrastructure for food storage
16%
14%
More infrastructure for food processing
14%
16%
Greater diversity of businesses from whom you purchase farm supplies and inputs
14%
16%
More online platforms for direct-to-consumer marketing
16%
12%
Greater number of market outlets
14%
12%
Greater buyer commitment to sourcing local product
14%
8%
Improved distribution and transportation infrastructure for Maine farm products
12%
10%
Better farm labor coordination / availability
12%
8%
More access to emergency funding
10%
10%
More online platforms for wholesale marketing
10%
8%
More general producer coordination
10%
6%
Assistance with building relationships with distributors/brokers
8%
8%
A statewide market coordinator for Maine farms
8%
8%
More meat slaughter and processing facilities
4%
12%
More resources on physical and/or mental health for farmers
6%
8%
Forward contracting
2%
8%
More access to loans
6%
2%
Assistance with GAP certification/HAACP plan/other food safety needs
2%
6%
0
5
10
15
20
25

Figure 17. Top 10 Desired Changes in the Food System by Primary Enterprise



Farmer Survey Key Findings — see page 6

Buyer Survey

Research Methods

A total of 22 respondents from Maine food businesses provided complete responses to a survey on pandemic impacts and local purchasing, representing all 16 state counties fairly evenly distributed across District 1 (Southern Maine) and District 2 (the rest of the state). The survey was intended for food buyers of all types: retail food stores, distributors, farm stands, institutions and restaurants. The businesses that responded were mostly retail stores, institutions, farm stands and restaurants (Table 2). The individuals responding to the survey were 45% managers, 37% owners and 18% other qualified staff. 45% of the food businesses surveyed were women-led/owned, one was Indigenous-owned/led, and none were Black- or POC-owned/led. The vast majority of respondents sold to individuals or consumers directly, while 30% were also selling products to other retail stores, restaurants, distributors and/or institutions. One respondent did not sell directly to consumers and only served other intermediary buyers. The buyer sample was not large enough to provide generalizable results, however the survey provides insights into the experiences of the survey participants.

Table 2. Entity Type by Business Activity

Buyer Entity Type	n	Business Activity
Retail - Cooperatives	6	All consumer cooperative retailers
Retail - Chain Corporations	3	All chain retailers
Retail - Sole proprietors	1	Independent retailer
Institution - Nonprofits	3	All Institutions, one specifying educational programming
Institution - Tribal	1	A multi-level tribal institution with farm stand (off and on farm), culturally important retailer, and distributor

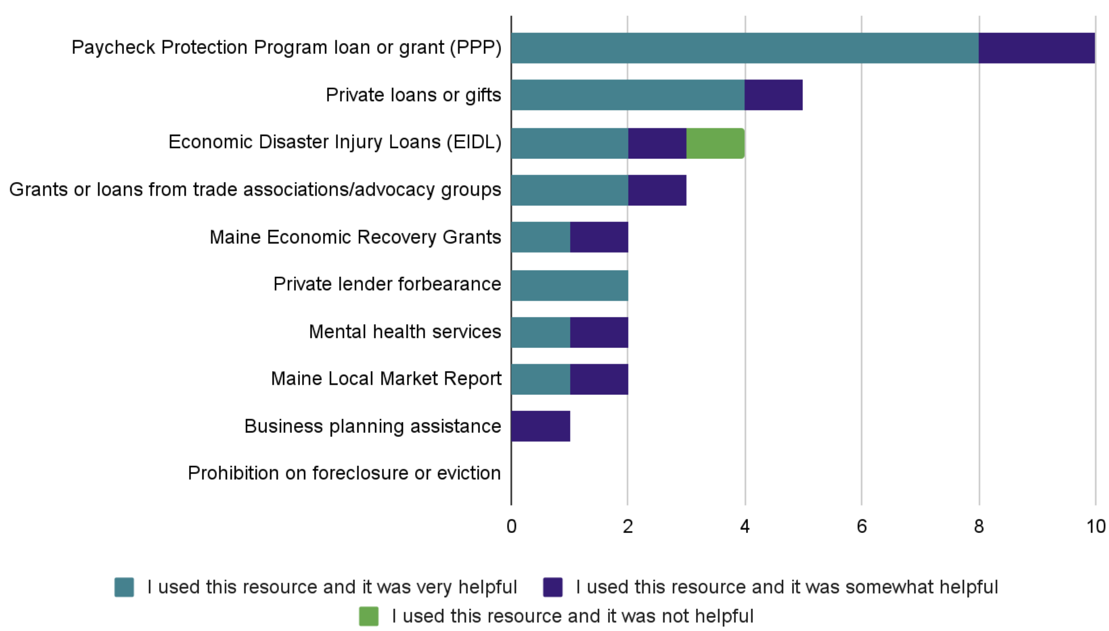
Institution - Corporations	1	A multi-level institution with retail, distribution and a restaurant
Farm Stands - LLCs	4	Two also practicing independent retail as part of their farm stands
Restaurants - LLCs	3	Restaurants only
Distributors - LLCs	1	Distribution only

Buyer Survey Results

Resources Utilized During COVID-19

- **The most used resource for the buyers surveyed during the pandemic was PPP followed by private loans/gifts, and the EIDL.** Only the EIDL was seen as unhelpful by one respondent. Few respondents accessed mental health services, Maine grants, private lender forbearance or business planning assistance (Fig. 18).

Figure 18. Resources Used during COVID-19, by Helpfulness

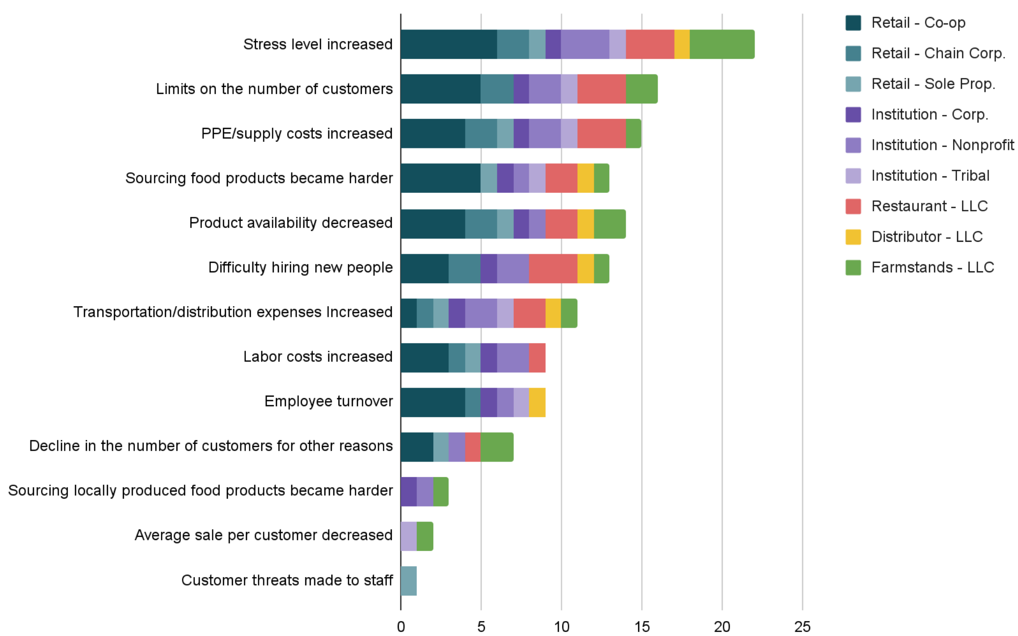


Immediate Threats and Concerns

- **Stress was one of the greatest and most threatening factors for buyers during the pandemic.** Other top threats included dealing with customer count limits, increased PPE supply costs, challenges sourcing food products, decreased product availability and difficulty hiring. Transportation and labor cost/retention issues were also seen as threatening by at least a third of respondents.

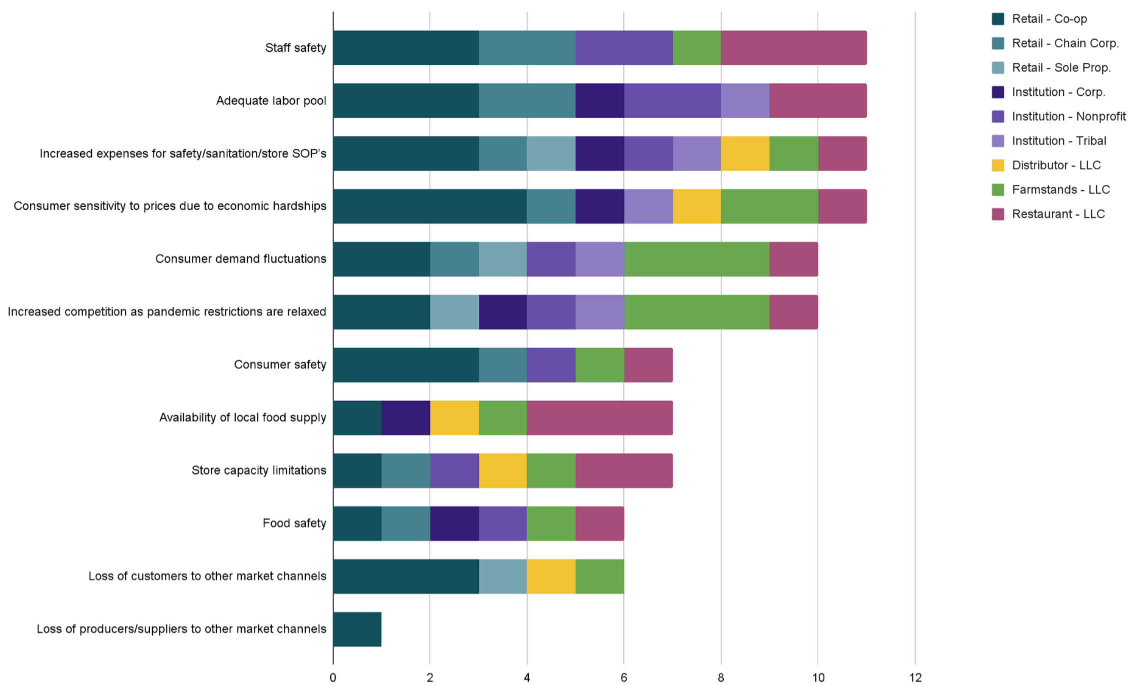
Concern around availability of local food supply was not widely shared among respondent buyers (30% shared this concern), and the pandemic did not greatly impact the importance of buying local for buyer respondents, of whom the vast majority had already prioritized buying local prior to the pandemic (Fig. 19).

Figure 19. Threats to Business Well-Being



- **Immediate COVID-19 concerns: staff safety, labor availability, increased costs and perceived consumer sensitivity to prices.** Half of respondent buyers saw staff safety, increased costs for sanitation supplies, an adequate labor pool and customer sensitivity to price increases to be immediately concerning in the aftermath of COVID-19 while food safety concerns, and concerns around losing producers and shoppers to other market channels, were not widely shared among respondents. Restaurant respondents were most strained by availability of local food. Price sensitivity was concerning to most food co-ops, and increased competition post-COVID, along with customer demand fluctuations, was disproportionately concerning to farm stand respondents. Additional concerns named by respondents included the increase in the costs of products, wages and supplies and a mention of how "changes in consumer behavior will require new business models to compete effectively" (Fig. 20).

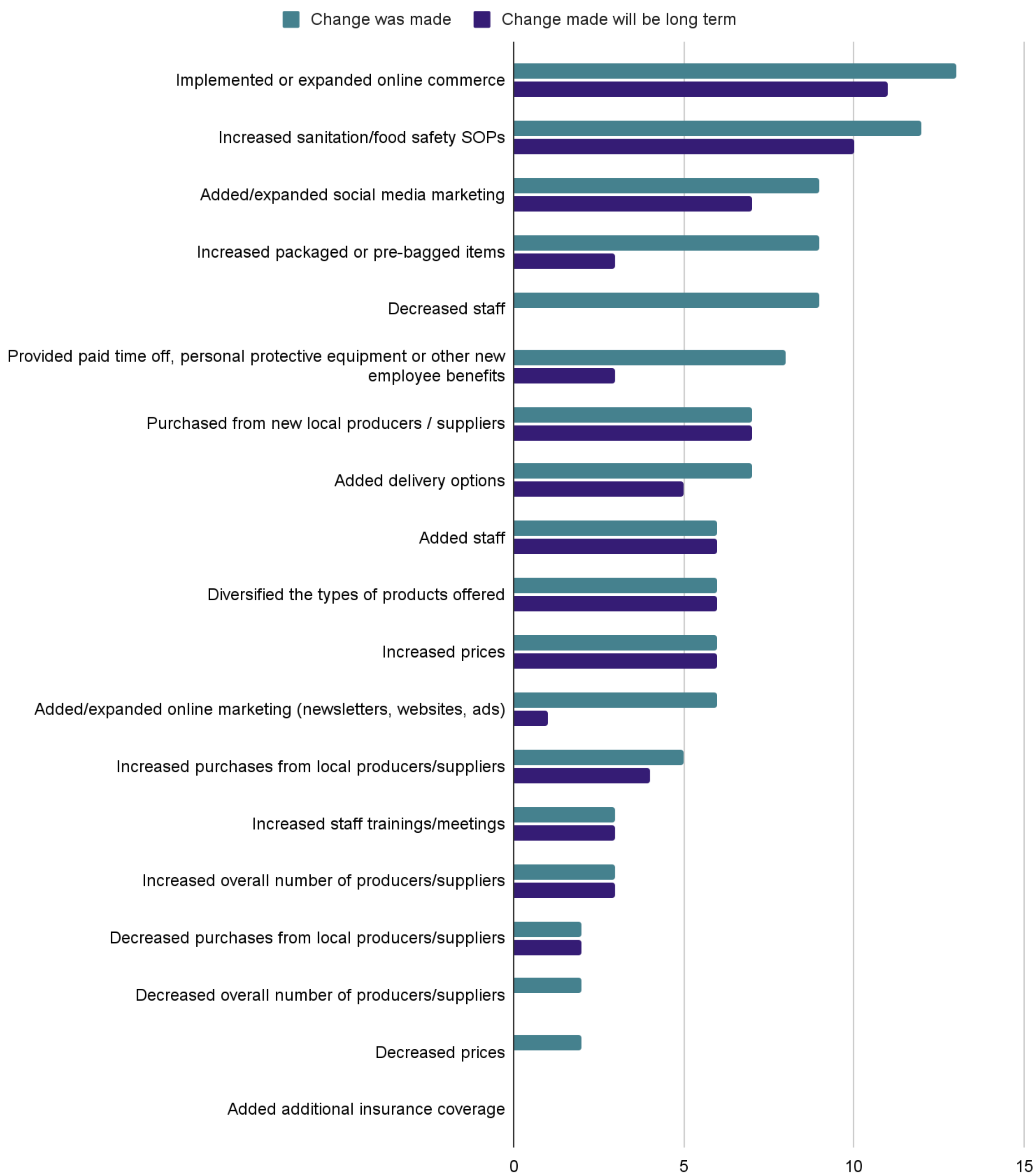
Figure 20. Immediate COVID-19 Related Concerns by Business Type



Changes made as a result of COVID-19, and which of them are expected to be long term

- **Online commerce, increased sanitation practices and purchasing from local suppliers top the list.** Most buyers (50-60%) implemented or expanded their online commerce and their sanitation practices, and plan to keep these changes. Approximately 22% of respondents increased purchases from local suppliers and 18% plan to continue this level of increased local purchasing. Decreases in staff, reduction in overall number of producers/suppliers, and lowered prices are all changes that will not be kept by respondents, while those who implemented increases in prices (approximately 30% of respondents) will keep those changes (Fig. 21).

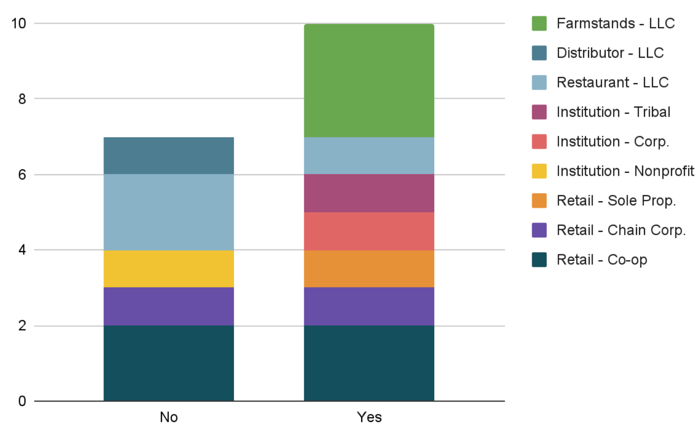
Figure 21. Changes Made as a Result of COVID-19



Local Foods and the Pandemic

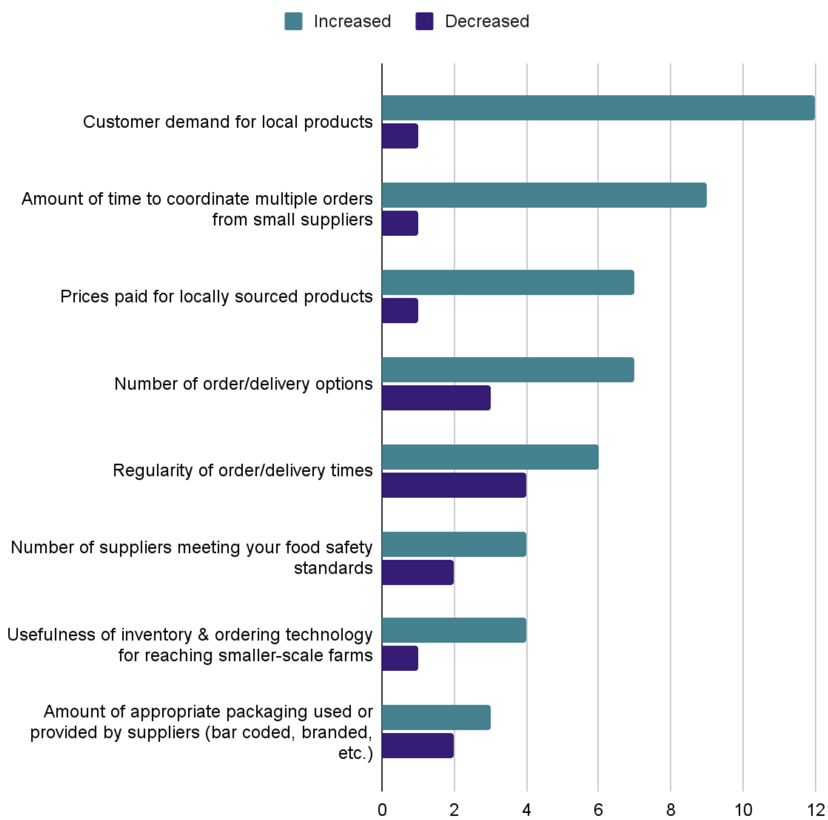
- **For most buyers, the importance of buying local products remained steady, while they had varying degrees of success buying as much local food as they wanted.** For the most part, buying local was either "very" or "somewhat important" to buyers, with little change from pre-pandemic to during the pandemic. Of the 17 buyer respondents who answered this question, 60% were buying as much local product as they would like to be while almost 40% desired to buy more local products. When broken down by business type, we saw that all farm stand respondents were buying as much local product as they would like, while food co-ops were split on reaching their local purchasing goals. Most restaurant respondents saw room for purchasing more locally, consistent with their concerns around the availability of local food supply (Fig. 22).

Figure 22. Buying Desired Amounts of Local Product (Y/N) by Business Type



- **Buyers generally experienced an increase in customer demand for local products after the start of the pandemic, and in the time it took to coordinate orders of local products from small suppliers.** Also, order and delivery times became more irregular and less frequent for some buyers (Fig. 23).

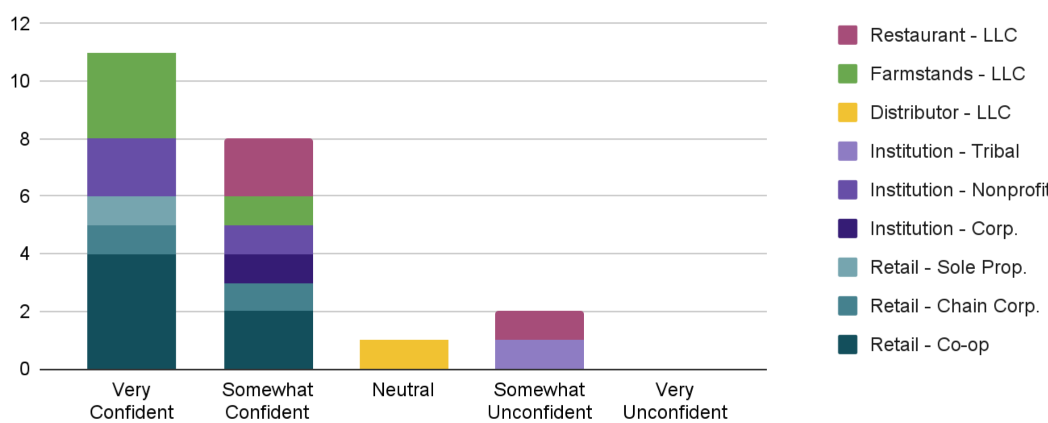
Figure 23. Changes in Local Buying Trends as a Result of COVID-19



Future Resilience of the Maine Food System: Buyers' Perspectives

- **Half of respondent buyers were "very confident" in their ability to withstand or quickly adapt to future disruptions to the food system, while another 35% were "somewhat confident" (Fig. 24).**

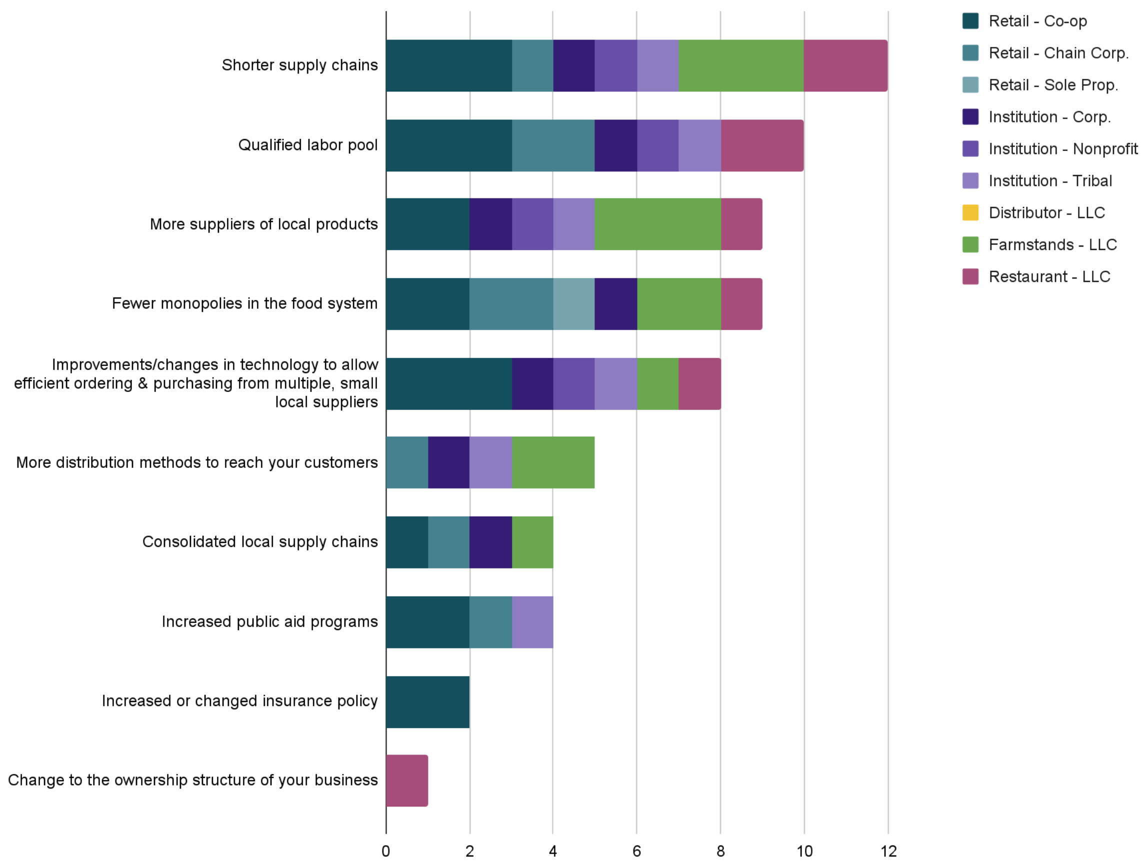
Figure 24. Confidence in Resilience, by Business Type



Desired Changes in the Food System

- **Shorter supply chains, availability of qualified labor, increased local product supply and fewer food system monopolies were the top changes buyer respondents would like to see made to the current food system in the wake of COVID-19.** These were closely followed by technology improvements for greater ordering and purchasing efficiencies when working with smaller-scale producers (Fig. 25).

Figure 25. Desired Changes to the Food System, by Business Type



Buyer Survey Key Findings — see page 7

Conclusions

The survey responses give us some indicators of how the food system is being affected by COVID-19. Since the rate of transmission is still high and the pandemic is far from over, it's too soon to draw any conclusions about how the Maine food system may have changed for the long term. Our key findings demonstrate the perceived need for changes and support for a more diverse, resilient supply chain, which should include more **technology** to connect producers and buyers and more processing **infrastructure**. The respondents also emphasize the importance of **grants** for farmers and small businesses. Overall, however, many farmers saw an increase in gross income, which even if not linked to increased profitability due to the increase in COVID-related expenses, indicates a positive direction of **increased consumer support** for local Maine farms.

Moving forward, we think this research must take a more longitudinal approach to test some of the assumptions about 2021. In times of economic upheaval like the present, we believe it is very important for Maine government institutions and other organizations to gather data on how the state is being affected. When surveyed in the spring of 2021 as vaccinations became widely available, many farmers assumed their sales growth trajectory would continue, but our sense of the pandemic's course has already been disrupted repeatedly since the spring with low vaccination rates in some areas and the rise of the Delta and Omicron variants.

Below we share a summary of our conclusions from this project.

- One of the most significant changes that happened during the pandemic that our respondents anticipate continuing was farmers selling products to other farmers for resale — it was apparent that a cross section of farms, likely with some kind of geographic or infrastructure capacity advantage, were able to increase their purchasing of and **marketing** for products from other farmers during the pandemic.
- The utilization of **e-commerce** and online marketing increased with both farmers and buyers, and there is a high level of expectation to continue this long term, which matches consumers' interest in increased utilization of online ordering and continued use of services such as home food delivery.
- Both farmers and buyers increased their **food safety sanitation practices**, including the use of packaged and pre-bagged items, which matches consumers'

interest in continuing to purchase pre-bagged and bulk items. This continued practice, along with individual requests that we've received from farmers, may indicate a need for more environmentally friendly packaging options.

- There were overlapping threats to the well-being of businesses for both farms and food buyers, which included:
    - **Stress/mental and physical health concerns**.
    - **Increased cost and availability of sanitation supplies.**
    - **Labor availability.**
    - **Staff safety**.
- Farmers told us they need **more access to grant funding**. Farmers and buyers accessed emergency funding primarily from the federal government (PPP and EIDL were most common) and found these grants to be an important source of resilience for their businesses. It is important to note that underrepresented stakeholders reported being unable to access this funding.
- Farmers did and will continue to **access new markets** and **scale up production**. Many farmers reacted to COVID by accessing new markets (retail, wholesale and online) or scaling up production, and are planning for these to be long-term changes. Those who dropped markets or scaled down do not intend for these changes to be long term.
- Farmers indicated that more **local supply businesses** and lower supply prices would increase their resilience, particularly in District 2.
- For both buyers and consumers, **the importance of locally produced food remained steady** as a result of COVID-19 — for the most part, buying locally ranked high in importance both prior to and during the pandemic.
- For equitable access, **local food needs to be culturally appropriate, affordable and available**.
- Key stakeholders of underrepresented voices expressed that food system needs were inextricably linked to accessing child care, support for front-line workers, and language justice.

Recommendations

- **Highlight existing resources**. First, we direct readers to Appendix 2: Existing Resources. While more support is needed for a resilient food system, we would be remiss to ignore that which already exists.
- **Generate action.** Agricultural service providers and government agencies need to engage in conversation about these findings to uncover existing resources, identify activities and work in collaboration. Research methods utilized by white-led organizations that involve underrepresented voices need to be coordinated and generate actionable efforts.
- **Make more grant funding available, accessible and equitable**. Grant funding is needed for farmers and food businesses. Funders must review their applications

and processes with an equity lens to evaluate who has access to apply for and receive grants, and remove those barriers.

- **Continue tracking impacts**. Continued assessment of COVID-19 impacts and resilient adaptations is needed.
- **Improve technology for e-commerce.** Farmers have not only utilized payment-based services (websites and platforms that operate as online storefronts), but also free solutions (like emailing or social media posts) that effectively reach consumers and buyers for sales transactions. Education, promotion and support will help continue to build this market channel.
- **Improve technology and infrastructure for buyers**. Work on understanding and removing the barriers that keep food buyers from purchasing more products from more Maine producers. Increase support for farmers' ability to purchase products from other farms.
- **Invest in infrastructure** that will create continued opportunities for farms to access new markets and scale up production. Farmers want to see an increase in the value of local food to consumers, and processing infrastructure for more shelf-stable products would leverage consumers' continued interest in local food and perhaps better match their decreased shopping trips and expenditures.
- **Increase consumer support for local food.** Devise public outreach programs, marketing materials, press releases and other ways to tell the story of how and why Maine food in Maine marketplaces is good for all of us.
- **Support increased food safety.** Education, technical assistance and financial resources are needed to increase food safety.
- **Support the development of environmentally friendly packaging.** Farmers did increase their use of packaging materials during the pandemic, but indicated they did not want this to be a long-term change, as it undoubtedly adds to labor and costs but also to the waste stream. Solutions should be sought that lower the carbon footprint and ecological impact of plastic bags.
- **Support mental and physical health**. Healthcare, in particular mental healthcare, is very expensive in the United States, and as small business owners or employees, many farmers and retailers do not have access to high-quality health insurance to enable their access to care.
- **Increase availability and affordability of supplies.** Make sure that local and independent retailers stay in business by targeting at-risk local supply businesses for exit planning and next generation empowerment with entrepreneur programs.
- **Increase skilled labor availability.** Ensure the Maine food system is seen as a safe, viable and supportive industry, attracting and retaining an adequate workforce. Offer education and support for employee safety.
- **Provide education and support for cooperative marketing strategies.** Increase efforts to support farmer awareness of cooperative marketing solutions to turn existing and/or desired farmer collaborations into supportive structures for more coordinated and resilient farmer-to-farmer relationships.

Appendices

Appendix 1 - Special Thanks

We would like to give special thanks to the individuals who helped us design our research process and gave their feedback along the way: Jonathan Malacarne (University of Maine), Jim McConnan (University of Maine), Christine Cummings (Maine Grocers and Food Producers Association), Claire Eaton (Maine Department of Agriculture, Conservation and Forestry) and Sue Hanson (Maine Center for Entrepreneurs), as well as numerous staff at CEI, CDI, MOFGA and MFT. In particular, we want to thank the individuals who spoke with us on behalf of their respective communities to ensure that their voices were also represented in this report. We are very grateful for their time, willingness to share, and trust.

Appendix 2 - Existing Resources

Maine Farmer Resource Network

Physical, stress and mental health concerns

- Farm and Ranch Stress Assistance Network
- Ag Mediation and farm coaching

Labor availability and staff safety

- Farm Labor Link Network
- MOFGA job board

Farmer grants and technical assistance

- Maine Farmland Trust's Farming for Wholesale program

- MOFGA grants and financial resources — MOFGA also offers grant-writing technical assistance, and occasional educational workshops on grant writing
- MOFGA's document of current grant programs and business development opportunities available for farmers throughout the region
- Agricultural Development Grant
- Agricultural Marketing Loan Fund
- Dairy Improvement Fund
- Maine Farms for the Future
- Rural Rehabilitation Trust Fund
- USDA Specialty Crop Block Grant Program
- Subscription forms for newsletters where up-to-date grant information is regularly published:
  - University of Maine Cooperative Extension's Maine Farm News
  - MOFGA's Farmer Programs Newsletter

Technology to connect farmers, buyers and consumers

- Maine Produce Market Report
- FarmDrop
- Forager

Food safety education, technical assistance and funding

- Maine Produce Safety Improvement Grant

Local Food Access

- Maine Harvest Bucks
- Maine Farm Fresh Rewards
- Maine Farm Food Access Program
- Maine Senior FarmShare Program
- Mainers Feeding Mainers

- SNAP - Supplemental Food Assistance Program

Cooperative food systems resources

- Cooperative Development Institute (CDI) Cooperative Food System Program
  - Food business resources
- CDI Cooperative Resource Library
  - How to start a co-op packet
  - Resources for businesses transitioning to cooperative ownership
- Greenhorns Cooperative Farming Guide
- USDA Cooperative Services
- USDA Shared Service Cooperatives Guide
- US Federation of Worker Cooperatives Co-op Clinic
- How to Start a Buying Club
- How to Start a CSA
- Poster: It Takes Cooperatives to Build a Regional Food System
- Lender to cooperatives: Cooperative Fund of New England
- Harvest New England Collaborative Marketing Program

Appendix 3 - Links to relevant surveys

- **Maine Farmer Resource Network's COVID-19 Survey Results:**
  FIRST COVID-19 Maine Farmer Survey Data Analysis
  SECOND COVID-19 Maine Farmer Survey Data Analysis
  THIRD COVID-19 Maine Farmer Survey Data Analysis
- **Consumer Food Insights:**
  lfscovid.localfoodeconomics.com/consumer-food-insights
- **The Hartman Group's consumer survey spring 2021:**
  progressivegrocer.com/quest-normalcy-nations-food-culture-new-report
- **Acosta's new report on multicultural household's consumer trends:**
  progressivegrocer.com/buying-consumption-habits-multicultural-households-new-report

Appendix 4 - Underrepresented Voices Key Informant Interview Approach

Early in the research design, our research team realized that conducting interviews with underrepresented groups was a process that needed to be handled with extreme care so as not to perpetuate existing research fatigue and exploitative research practices among communities. Original proposed approaches took a more extractive angle by design and we amended that approach to be more generative in style. Specific measures taken to offer a more generative process included the following:

- We were less centered around individual demographics and more focused on individual and community self-identification.
- Our interview questions were co-designed with representatives of underrepresented groups and vetted for appropriateness, implicit bias and other blind spots that may be present given an all-white research team.
- Our informants were selected based on their community leadership roles and lived experience and based on existing channels of trust and relationships — our invitations to conversations were generally informal and conversational in nature to avoid a sense of being examined as opposed to simply being heard.
- We communicated our process was about listening to broad qualitative perceptions shared among community members as part of a community dialogue.
- We offered stipends for key informants' time in conversation with us as well as stipends for time reading and vetting the findings.
- We recognized, and still do, that these efforts alone are not enough to improve research processes to be more participatory and generative, and commit to continuous efforts and learning to improve processes.
- We commit to generating feedback loops with communities that lead to the direct sharing of results as well as a commitment to turning results actionable in ways meaningful to underrepresented groups that have supported the research.

Appendix 5 - Assessment of Consumer-Farmer Survey Discrepancies

We noted some discrepancies between the consumer survey findings and the farmer survey findings, particularly around 2019 v. 2020 comparisons of consumer use of farm stand and CSA market channels, where the consumer survey showed a decline in average sales per market channel whereas farmers reported an increase in sales via those channels. This may have occurred due to a combination of factors:

- A relatively small sample size of the farmer survey leading to disproportionate representation of farmers that experienced increases in these market channels due to geographic or other trends too small to parse within the data set.
- The possibility that, despite an overall statewide decline in consumers shopping at farm stands and CSAs, the increase in the number of farm stands coupled with an increased “basket size,” i.e., spending per shopper, may have increased, resulting in greater sales in 2020 than in 2019.
- The distribution of Maine’s population is fairly skewed geographically and by other independent demographic factors such that the attempt to mirror that distribution for both surveys, given relatively small sample sizes, could potentially lead to skews and/or variance in one or both data sets. This may result in a failure to clearly identify geographic micro-trends using statistics appropriate for the sample sizes (i.e., the consumer data dashboard indicated increases of farm stand and CSA consumer shopping among coastal counties that are also typically more populated between 2019 and 2020, and when aggregated, this trend is no longer visible).
- Pre-post assessment discrepancies across surveys, e.g., farmers compared trends over the duration of the calendar years 2019 and 2020, and consumers compared a more subjective definition of duration based on a point in time: “pre-pandemic and after the onset of the pandemic, referred to as ‘post- pandemic.’”

Appendix 4 - Survey Questions and Interview Guides

Farmer Survey

1. Which Maine counties does your business currently farm in?

Androscoggin County, Aroostook County, Cumberland County, Franklin County, Hancock County, Kennebec County, Knox County, Lincoln County, Oxford County, Penobscot County, Piscataquis County, Sagadahoc County, Somerset County, Waldo County, Washington County, York County

2. What are your Primary and Secondary farm enterprises (Check all that apply)?

	Primary	*Secondary*
Beef		
Dairy		

Hogs Sheep/goats Poultry/fowl Eggs
Row crops (corn, soybeans, etc) Small grains (wheat, oats, barley, etc) Small fruit or berries
Vegetables
Hay/silage/corn
Fiber
Flowers
Hemp
Marijuana
Medicinal herbs
Mushrooms
Honey/apiary products
Agritourism
Value-added products
Seedlings
Nursery/Horticultural Crops
Seeds
Maple Syrup
Orchard/Tree fruit
Aquaculture
Other (please specify)

3. Is your farm:

Yes
No

Certified Organic?
GAP Certified?

4. How many of each type of employee did you have in the following years (please include yourself as an employee-owner)?

2019
2020
Planned for 2021
Full Time - year-round
Part Time - year-round
Full Time - seasonal
Part Time - seasonal

5. What were your Gross Receipts (in dollars) for each of the following market channels in the year of 2019? (If zero, feel free to leave blank)

Farmers Markets
Own Farm Stand / on-farm sales
Farm Stand owned/ operated by others
Farm Website / online sales platform
CSA
Retail Stores
Restaurants
Distributors
Institutions
Processors
Agritourism
Other farm income (services for hire, sale of assets, etc.)

6. What were your Gross Receipts for each of the following market channels in the year of 2020? (If zero, feel free to leave blank)

Farmers Markets
Own Farm Stand / on-farm sales
Farm Stand owned/ operated by others
Farm Website / online sales platform
CSA
Retail Stores
Restaurants
Distributors
Institutions
Processors
Agritourism
Other farm income (services for hire, sale of assets, etc.)

7. What do you anticipate your Gross Receipts to be for each of the following market channels in the year of 2021? (If zero, feel free to leave blank)

Farmers Markets
Own Farm Stand / on-farm sales
Farm Stand owned/ operated by others
Farm Website / online sales platform
CSA
Retail Stores
Restaurants
Distributors
Institutions
Processors
Agritourism
Other farm income (services for hire, sale of assets, etc.)

8. What threats to the well-being of your business arose as a result of COVID-19? (Check all that apply)

Wholesale markets closed
Retail markets closed
Wholesale prices dropped
Retail prices dropped
Farm supplies and inputs became more difficult to source
Other (please specify)
Farm supplies and inputs became more expensive
New farm supplies and inputs needed to be purchased (eg: PPE, sanitizers, etc)
Labor costs increased
Number of employees had to be cut
Number of employees had to be increased
Availability of labor became limited
Access to and use of processing infrastructure became limited
Transportation and distribution challenges increased
Increased mental health concerns Increased physical health concerns

9. How has your business changed as a result of COVID-19? Of the changes indicated, which do you want to be long term? (Check all that apply)

Change was made
I want it to be a long term change

Cut back the planned growth/expansion of business
Increased or began buying in product from other farmers
Decreased or stopped buying in product from other farmers
Increased or began selling product to other farmers
Decreased or stopped selling product to other farmers
Increased staff trainings/meetings
Increased packaging or pre-bagging items
Increased sanitation/food safety SOP's
Increased the number of businesses from which farm supplies and inputs are purchased
Decreased the number of businesses from which farm supplies and inputs are purchased
Stopped farming
Accessed new wholesale markets Accessed new direct-to-consumer markets Accessed new online markets
Lost or dropped wholesale markets
Lost or dropped direct-to-consumer markets

Change was made
I want it to be a long term change

Lost or dropped online markets
Scaled down production
Scaled up production
More diversified production
Less diversified production
Increased overall diversity/number of markets
Decreased overall diversity/number of markets
Increased donation of food to pantries, gleaners, etc. Decreased donation of food to pantries, gleaners, etc. Accessed counselling or other stress management services
Other changes made (please specify)

10. Currently, how confident are you that your business is able to withstand or quickly adapt to future disruptions to the food system?

Very confident Somewhat confident Neutral
Somewhat unconfident Very unconfident

11. In your own words, please explain why your current level of confidence in your business's ability to withstand or quickly adapt to future food system disruptions is what it is:

12. What immediate concerns do you have relating to the impact of COVID-19 on your business? (Check all that apply)

Wholesale market stability - restaurants
Wholesale market stability - institutions/food service
Wholesale market stability - distributors
Wholesale market stability - grocery/natural foods stores
Direct-to-consumer market stability
Local food demand in wholesale markets
Local food demand in direct-to-consumer markets
Price sensitivity and/or price points required in wholesale markets
Consumer price sensitivity in direct-to-consumer markets
Increased expenses for worker safety/sanitation/farm SOP’s
Costs, regulations and other hurdles for GAP certification or other regulation/license/ certification barriers
Building and maintaining relationships for selling to distributors/brokers
Distribution and infrastructure getting farm products to market
My farm's solvency / ability to pay off debts
Personal Health/Wellness
Stability and availability of needed farm supplies and inputs Adequate labor pool

13. Please indicate the level of need you have around receiving support and/or assistance with any of these immediate concerns.

A great need for support
Somewhat in need of support
Not at all in need of support

Wholesale market stability
Direct-to-consumer market stability
Farm supplies and inputs
Adequate labor pool
Local food demand
Increased expenses for worker safety/sanitation/farm SOP's
Consumer price sensitivity in direct-to-consumer markets
Price sensitivity and/or price points required in wholesale markets
Costs, regulations and other hurdles of selling to distributors/brokers
Distribution and infrastructure getting farm products to market
Personal Health/Wellness
My farm's solvency / ability to pay off debts

14. What resources did you use and/or access during the pandemic? (if you did not use the resource, please leave blank)

Paycheck Protection Program loan or grant (PPP) Economic Disaster Injury Loans (EIDL)
Maine Economic Recovery Grants
Private lender forbearance
Prohibition on foreclosure or eviction Voluntarily increased your prices
Grants or loans from trade associations/advocacy groups/Nonprofits
Private loans or gifts
Business planning assistance
Mental health services
Coronavirus Food Assistance Program (CFAP) Reimbursement program from DACF

I used this resource and:
was not helpful
was somewhat helpful
was very helpful

15. In the wake of COVID-19, what changes in the food system would make you feel more able to avoid, withstand or react to threats? (check all that apply)

More infrastructure for food storage
More infrastructure for food processing
More infrastructure for food transportation / distribution
Greater diversity of businesses from whom you purchase farm supplies and inputs
More locally based businesses from whom you could purchase farm supplies and inputs
Assistance with GAP certification/HAACP plan/other food safety needs
More opportunities for Cooperative marketing
More general producer coordination Comments:
Assistance with building relationships with distributors/brokers
Forward contracting
More meat slaughter and processing facilities
More access to grants
More access to loans
More access to emergency funding
More online platforms for direct-to- consumer marketing
More online platforms for wholesale marketing
Improved distribution and transportation infrastructure for Maine farm products
Greater number of market outlets
Better farm labor coordination / availability

More resources on physical and/or mental health for farmers
Lower prices for farm supplies and inputs
Greater buyer commitment to sourcing local product
A statewide market coordinator for Maine farms

16. Do you have any other questions or comments about longer-term concerns with the impacts of the COVID-19 pandemic, and/or what conditions would make Maine farms more resilient to future food system shocks?

17. Do you operate a retail business (like a farmstand) where in addition to selling your own products, you purchase in local product from other farms or producers for resale?

Yes
No

18. What was the total cost of local farm products that you bought in for resale in the following years?

2019
2020
Planned for 2021

19. Did you buy from more, fewer, or the same number of vendors in the following years?

Bought from the same number
Bought from more venders
Bought from fewer venders

2019
2020
Planned for 2021

20. What is your age? (in years) Under 18

18-24
25-34
35-44
45-54
55-64
65+

21. What is your gender identity? (Check all that apply)

Female
Male
Transgender female
Transgender male
Non-binary
third gender
Not listed
Prefer not to say
Other (please specify)

22. Which of the following best describes you? (check all that apply)

African or African-American
Asian or Asian-American
Latinx or Hispanic
European or European-American (white) Other (please specify)
Native American (American Indian or Alaska Native) Pacific Islander (includes Native Hawaiian)
Prefer not to say

23. Have you served on active duty in the U.S. Armed Forces, National Guard, Coast Guard or Reserves?

Yes
No

Buyer Survey

1. What best describes your role in the business?

Owner
Management
Other staff with high-level knowledge of the business

2. Which Maine counties does your business currently operate in? (check all that apply)

Androscoggin County, Aroostook County, Cumberland County, Franklin County, Hancock County, Kennebec County, Knox County, Lincoln County, Oxford County, Penobscot County, Piscataquis County, Sagadahoc County, Somerset County, Waldo County, Washington County, York County

3. How would you describe your business? (check all that apply)

On-farm farm-stand
Off-farm farm-stand
Independent retail food store
Chain retail food store
Cooperatively owned retail food store
Distributor
Other / engaged in another type of resale (please specify)

4. My business identifies as a (check all that apply): Black-owned / led business

Indigenous-owned / led business POC-owned / led business LGBTQ-owned / led business Women-owned / led business Other (please specify)

5. What best describes your business's structure? Sole proprietor

LLC
Corporation Cooperative Non-profit
Other (please specify)

6. Who are your customers? (select all that apply) Individuals/consumers

Independent retail food stores
Chain retail food stores
Cooperatively owned retail food stores Distributors
Brokers
Institutions Restaurants
Other (please specify)

Please note, for the following questions, we will define locally sourced as organic and nonorganic commodities and value-added products grown and/or processed within the state of Maine.

7. What threats to the well-being of your business arose as a result of COVID-19? (Check all that apply)

Labor costs increased PPE/supply costs increased
Transportation/distribution expenses Increased
Sourcing food products became harder
Other (please specify)
Sourcing locally produced food products became harder
Limits on the number of customers
Decline in the number of customers for other reasons
Average sale per customer decreased
Product availability decreased Stress level increased Employee turnover
Difficulty hiring new people

8. How has your business changed as a result of COVID-19? Of the changes indicated, which do you want to be long term? (Check all that apply)

Added staff
Decreased staff
Provided paid time off, personal protective equipment or other new employee benefits Increased staff trainings/meetings
Implemented or expanded online commerce
Added delivery options
Increased packaged or pre-bagged items
Increased sanitation/food safety SOPs
Purchased from new local producers / suppliers
Increased purchases from local producers/suppliers
Decreased purchases from local producers/suppliers
Increased overall number of producers/suppliers
Decreased overall number of producers/suppliers
Diversified the types of products offered
Added additional insurance coverage
Increased prices
Decreased prices
Added/expanded social media marketing
Added/expanded online marketing (newsletters, websites, ads)
Other changes made (please specify)
Change was made
I want it to be a long term change

9. Currently, how confident are you that your business is able to withstand or quickly adapt to future disruptions to the food system?

Very confident
Somewhat confident

Neutral
Somewhat unconfident
Very unconfident

10. What immediate concerns do you have relating to the impact of COVID-19 on your business? (Check all that apply)

Staff safety
Adequate labor pool
Consumer safety
Food safety
Increased expenses for safety/sanitation/store SOP's Availability of local food supply
Consumer demand fluctuations
Consumer sensitivity to prices due to economic hardships Loss of customers to other market channels
Loss of producers/suppliers to other market channels Store capacity limitations
Increased competition as pandemic restrictions are relaxed
Other (please specify)

11. What resources did you use and/or access during the pandemic? (if you did not use the resource, please leave blank)

Paycheck Protection Program loan or grant (PPP) Economic Disaster Injury Loans (EIDL)
Maine Economic Recovery Grants
Private lender forbearance
Prohibition on foreclosure or eviction
Grants or loans from trade associations/advocacy groups
Private loans or gifts Business planning assistance Mental health services
Maine Local Market Report

I used this resource and it :
was not helpful
was somewhat helpful
was very helpful

12. In the wake of COVID-19, what changes in the food system would make you feel more able to avoid, withstand or react to threats? (check all that apply)
Consolidated local supply chains Shorter supply chains
More distribution methods to reach your customers
More suppliers of local products
Comments:
Improvements/changes in technology to allow efficient ordering & purchasing from multiple, small local suppliers
Fewer monopolies in the food system
Change to the ownership structure of your business
Increased or changed insurance policy
Increased public aid programs Qualified labor pool

13. Do you have any other questions or comments about longer-term concerns with the impacts of the COVID-19 pandemic, and/or what conditions would make food buyers more resilient to future food system shocks?

Please note, for the following questions, we will define locally sourced as organic and nonorganic commodities and value-added products grown and/or processed within the state of Maine.

14. How important is it for your business to buy in local foods (both prior to and as a result of COVID-19)?

Prior to COVID-19
As a result of COVID-19
Very important Somewhat important Neutral
Somewhat unimportant Not at all important

15. Is your business buying as much local food as you would like it to be?

Yes
No

16. When **buying locally sourced food,** what would you say has increased or decreased as a result of COVID-19? If neither, please leave blank. (Check all that apply)

Increased
Decreased
Number of order/delivery options Regularity of order/delivery times
Amount of appropriate packaging used or provided by suppliers (bar coded, branded, etc.)
Amount of time to coordinate multiple orders from small suppliers
Usefulness of inventory & ordering technology for reaching smaller-scale farms Prices paid for locally sourced products
Customer demand for local products
Number of suppliers meeting your food safety standards

Key Informant Interview Guide/Transcript - COVID Underrepresented Mainers

Key Informant Name:	
Community Leadership Status Preference:	
Date of Interview:	
Name of Interviewer:	

Intro: *Thank you for agreeing to speak with me today. I am with the Cooperative Development Institute, and I am working on behalf of the Maine Organic Farmers and Gardeners Association to better understand some of the under-represented impacts to COVID on disadvantaged groups. As a community leader, I wanted to ask you some questions and hear about some of your experiences to better inform our research -- this research will be used for both communicating about COVID in informed ways and to inform policy and market work at the state level. Your statements will remain strictly confidential. Before we begin, do you have any questions for me?*

Do I have your permission to record our session today for accuracy?
[BEGIN RECORDING]

1. In a few words, how have you seen the community **managing through COVID**?
2. Since COVID, what has changed for you around **purchasing foods / shopping for food**, if anything?

3. How has COVID changed your attitudes around **local food production**? What about other **specialty food products** (imported, organic, bulk, etc.)?
    a. *Probes: Local as a priority? Organic? Specialty goods hard to find? Changes in shopping locations, frequency, stocking up and storing food, etc.)*
4. How have you observed any **disproportionate impacts of COVID-19 by socio-economic status**, if any?
    a. *Probes: job retention, income security, etc.*
5. How have you observed any **disproportionate impacts of COVID-19 by racial or ethnic status**, if any?
6. What have been some of the **greatest barriers to you, your family, and/or your community** during COVID-19?
    a. *Probes: food access issues, food safety issues, food assistance programs*
7. What are your **greatest short-term concerns** regarding the aftermath of COVID?
    a. *Probes: challenges around online shopping, curbside pickup, continued safety..*
8. What are your **greatest longer-term concerns** regarding the aftermath of COVID?
    a. *Probes: State of the economy, resiliency of the food system, dependence on internet commerce ...*
9. Have you seen any **positive outcomes or silver linings around the COVID situation** that you would like to name?
10. Any **final thoughts** you think it is important for us to know about your COVID experience thus far?

Key Informant Interview Guide/Transcript - Economists

Background: MFT, MOFGA, CEI and CDI are conducting a research project to understand the changes in the local food system during the COVID pandemic. We hope that the results of the research will give us a snapshot of the current challenges and opportunities given the dramatic changes of the past year, and enable us to adapt our programs and farmer services accordingly. We also hope the research will be useful for ag service providers, farmers, and buyers to learn more about the current state of the local food system.
We're talking with you at the very beginning of this project, to help inform our research design and goals based on your particular expertise.

<u>Pandemic Impact Questions</u>

What are the inequities that COVID-19 has exposed in our food system? (Maine? Global?)

What has been the economic impact of COVID-19 on Maine's Food system? (and regional food system)?

Changes in where people are buying food?

What are some of the unanswered questions you have about the impact on the pandemic on the local & global food system? What would be the value of having those answers, and for whom?

What recommendations do you have for our research design and goals?

Given an ever-shifting market, can we do this kind of 'landscape analysis' that will have any lasting value for our organizations and our stakeholders? If no, what can we learn from this snapshot in time about the state of the local food system?

How do we add value to some of the studies (BFRN, Forager) that have already been done in the state in the pandemic?