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Home Food Production Before, During and Since Start of the COVID-19 Pandemic in Northern New England

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Introduction

This brief details the results from three separate surveys of Northern New Englanders in Maine and Vermont in summer 2020, spring 2021, and spring 2022. A survey was conducted in summer of 2020 to understand the initial and continued impacts of the COVID-19 pandemic on food security, diet, and health outcomes. Two additional surveys were conducted using the same methods in spring 2021 and 2022 to continue to assess changes during the pandemic. All surveys were representative of the state populations on race and ethnicity and the data presented in this brief were weighted to be

representative of income in both states. Collectively, the surveys represent more than 3,000 individuals (Table 1). The intent of the surveys were to collect information about home food production (HFP) (gardening; fishing; harvesting shellfish; foraging; hunting; trapping; raising animals for meat, dairy, or eggs; and food preservation) and see how participation in HFP has changed since the beginning of the pandemic, the impact that HFP had and continues to have on food security, and the barriers that are faced by those that participate in HFP. Here we summarize the key findings across these three time periods as it pertains to HFP in Maine and Vermont combined. We examine engagement in different kinds of HFP activities, the intensity of HFP activities and changes over time, the drivers or barriers associated with HFP participation, and the relationship of food security to HFP.

Key Findings

1. HFP is common and has continued to increase among respondents since the beginning of the pandemic. Among respondents, 32% participated in HFP in 2020, 59% in 2021, and 65% in 2022.
2. The most common HFP activities in 2022 were gardening (48%) and food preservation (34%).
3. Food insecurity has been variable across years: 40% of households were food insecure in 2020, 31% of households were food insecure in 2021, and 39% of respondents were food insecure in 2022.
4. Food insecure households were more likely to participate in HFP (especially fishing, foraging, hunting, and raising animals for meat, dairy or eggs) compared to food secure households across all three surveys.
5. Pests (63%), weather (60%), and money for equipment or supplies (58%) were the biggest barriers for people participating in any HFP.

Year	Survey Timeline	Survey Sample Size
2020	First 6 months of the COVID-19 pandemic (spring 2020-summer 2020)	1,104
2021	First 12 months of the COVID-19 pandemic (spring 2020-spring 2021)	988
2022	Next 12 months of the COVID-19 pandemic (spring 2021-spring 2022)	1,013

Table 1. Details on the survey respondents and time frames.

Home Food Production

Among our cross-sectional surveys, we find the percent of respondents engaging in HFP has more than doubled from 32% in 2020 to 68% in 2022 (Figure 1). Gardening has consistently been the most popular HFP activity ranging from 28% participation in 2020 to 48% in 2022 (Figure 2). Food preservation is the second most popular HFP activity, with 20% of respondents indicating participation in 2020, which then increased to 34% in 2022. While participation in hunting, fishing, and foraging is less common, participation in each of these activities increased compared to before the

No HFP Participation **Any HFP Participation**



Figure 1. Percent of respondents reporting any HFP participation by year

COVID-19 pandemic. Raising livestock is the least common activity and the only HFP activity where participation in 2022 is lower than before the pandemic.

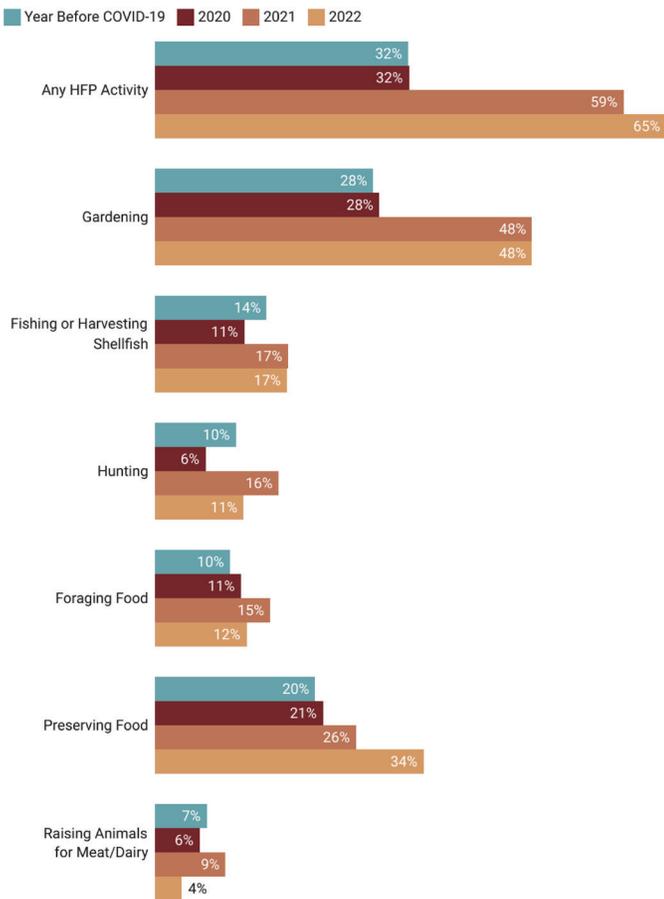


Figure 2. Percent of respondents reporting participation in specific HFP activities by year. The 2020 survey did not ask explicitly about poultry production for eggs.

Home Food Production Intensity Over Time

To understand how intensity has changed among the respondents in each of the survey years, we investigated if they participated in a HFP activity for the first time or did the activity more than in the previous year. The category of “year before COVID-19” data comes from questions asked on the 2020 survey. Overall, we find that the percent of respondents engaged in any HFP more or for the first time was highest in 2020, and has

decreased slightly in 2021 and 2022. In 2020, 50% of the respondents indicated they gardened for the first time or more, but this decreased to 46% in 2021, and then decreased again to 40% in 2022 (Figure 3). Across all HFP activities, the percentage of respondents that participated in a specific HFP activity for the first time or more in 2022 was lower than it was in 2020. In fishing, foraging, food preservation, and raising livestock, the percentage increased from 2020 to 2021, but then decreased in 2022 (Figure 3).

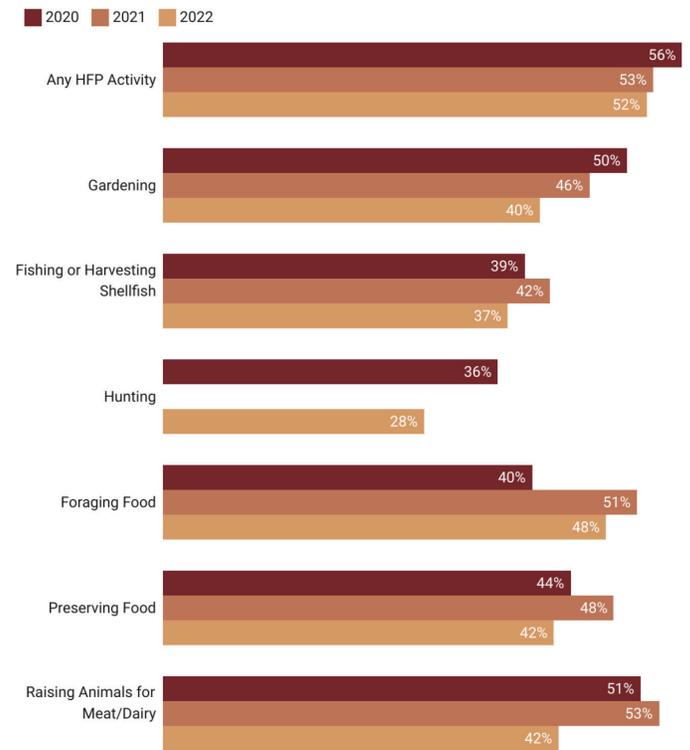


Figure 3. Percent of respondents participating in HFP activities who did HFP for the first time or more, by year

Food Insecurity

In 2020, the prevalence of household food insecurity (measured using the US Department of Agriculture six-item module) was 40% (Figure 4). Among respondents in the 2021 survey, food insecurity prevalence was 31% in 2021, but increased to 39% in 2022 among respondents.

■ Percent of respondents food insecure



Figure 4. Prevalence of food insecurity by year, with weighted data.

Food Insecure Households More Likely to Engaged in HFP

To further understand who is engaging in HFP and the changes in HFP participation since the start of the pandemic, we investigated each HFP activity by year and food security status. Across all years, respondents who were food insecure were more likely to participate in fishing, foraging, hunting, raising livestock, and raising poultry for eggs compared to food secure respondents (Figure 5). Households who were food insecure in 2020 and 2021 were more likely to participate in any HFP activity, but in 2022, food secure respondents were more likely to participate in any HFP activity (Figure 5).

Limitations and Barriers to HFP

In the 2022 survey, we asked about limitations and barriers to HFP, among those participating in any HFP activity, as well as the reasons why people did not engage in HFP. The most common barriers were pests (63%) and weather (60%), followed by lack of money for equipment and supplies (58%), and lack of time (53%) (Figure 6). For people who did not engage in HFP in 2022, we asked them why. The most common responses were not being interested in these activities (49%), not having enough time (41%), and lacking access to land (34%) (Figure 6).

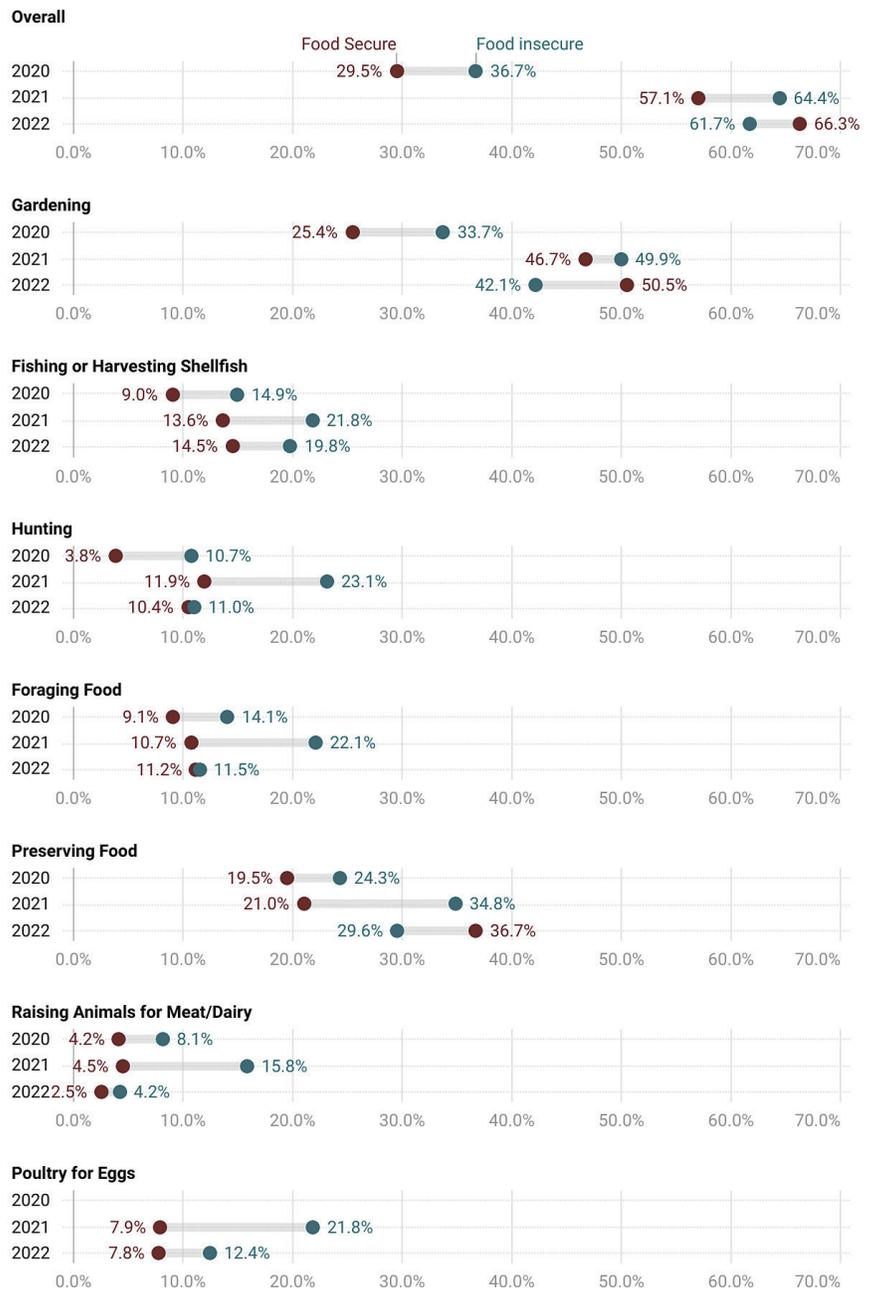


Figure 5. Engagement in HFP activities by food security status and year

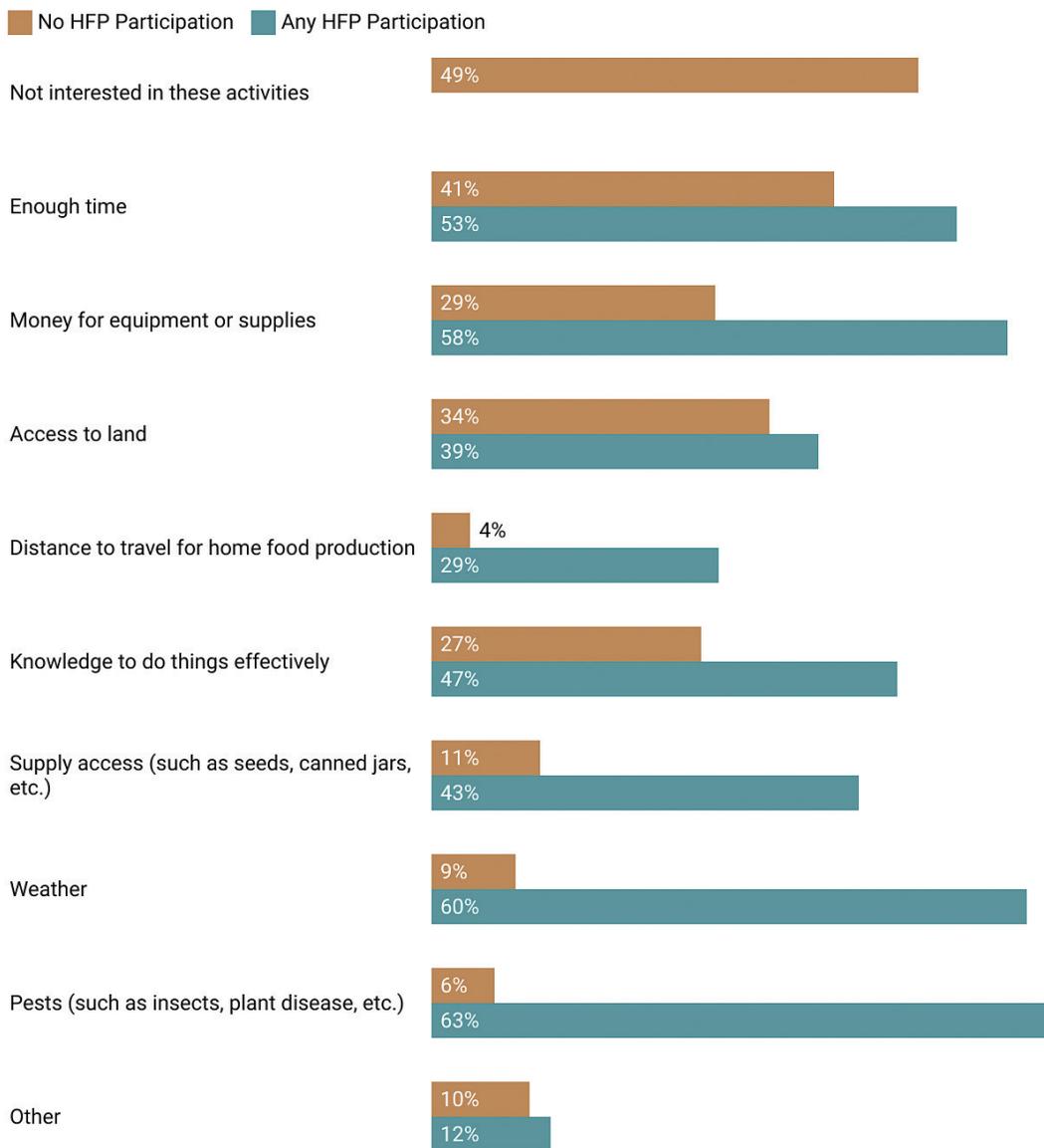


Figure 6. Barriers faced by people engaging in HFP activities, by food security status

When looking at the barriers faced by respondents engaged in HFP by food security status, across all barriers, food insecure respondents were more likely to indicate they had experienced each barrier compared to food secure respondents (Figure 7). The most common barriers faced by food insecure respondents were lack of money for equipment or supplies (90%) and pests (such as insects, plant disease, etc.) (73%) (Figure 7). Food insecure respondents were more likely to report a lack of money for equipment or supplies, issues accessing supplies like canning jars and seeds, and a lack of access to land compared to food secure respondents.

When examining reasons why respondents did not engage in HFP by food security status, food secure respondents indicated they weren't interested in these activities (58%) and lacked time (43%) at greater rates than food insecure respondents (Figure 8). However, all other reasons were more commonly reported among food insecure respondents. Among food insecure respondents, the most common reasons were lack of money for equipment and supplies (47%), lack of access to land (45%), and lack of time (38%).

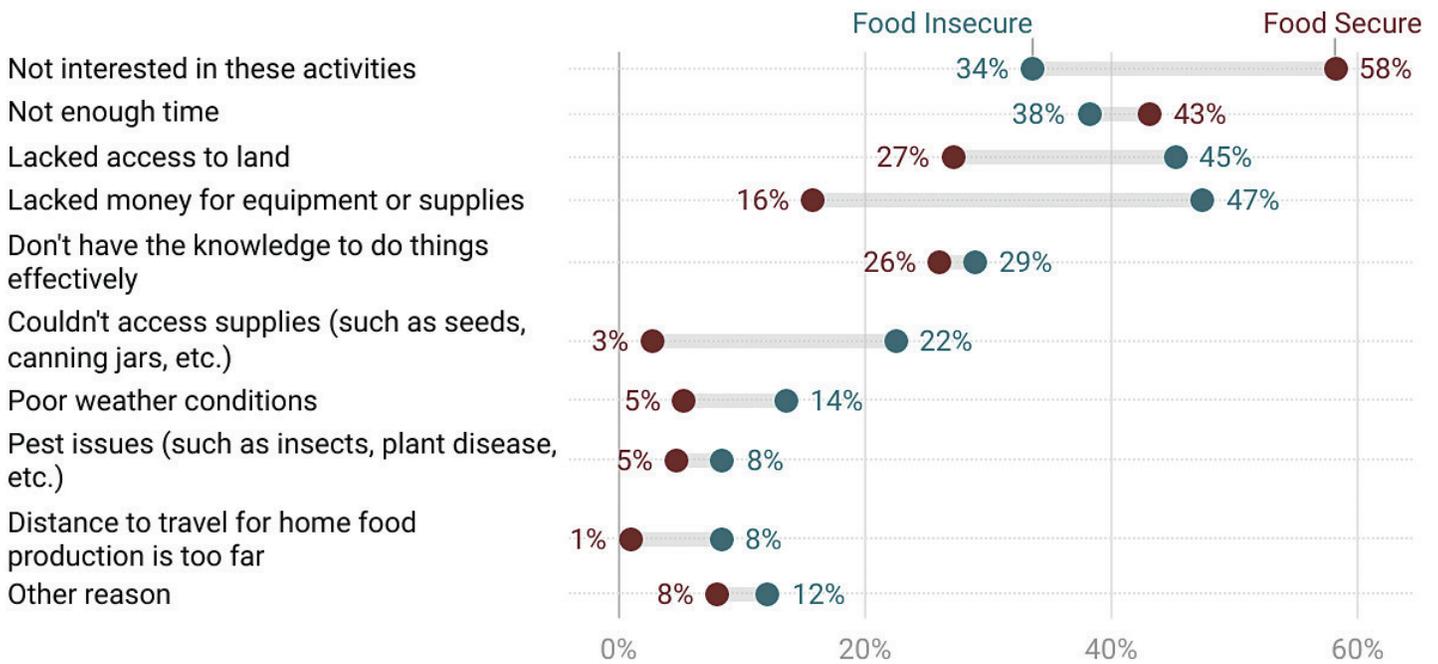


Figure 7. Barriers faced by respondents who participated in any HFP by food security status

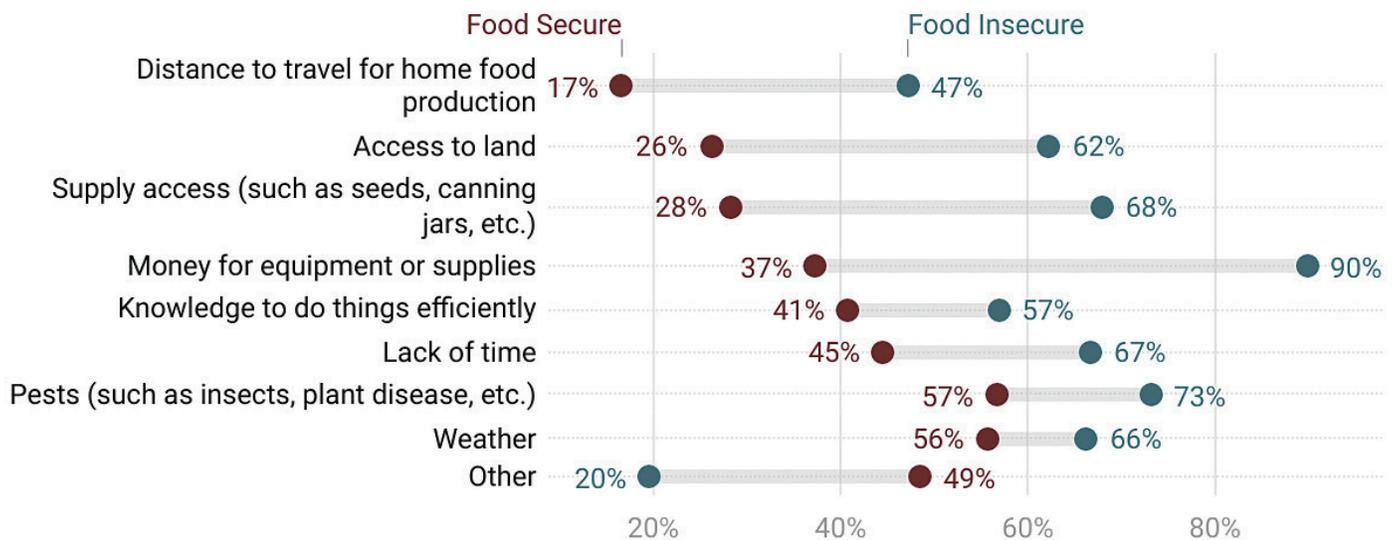


Figure 8. Reasons reported for not engaging in HFP activities in the last 12 months among respondents who did not do any HFP, by food security status (%)

Implications

Many recent studies have demonstrated the elevated prevalence of food insecurity during the COVID-19 pandemic, confirmed by these results. These findings demonstrate that HFP may have been an important coping mechanism for many households in Maine and Vermont. Given this preliminary research, food insecure people are more likely to participate in any HFP activities and continue them over time. Individuals that participate in HFP and are food insecure face multiple barriers that are largely financial or capital intensive, not knowledge based. Programs

and other support systems could be used to bridge the gaps to allow more people to engage in HFP activities, possibly contributing to improved food and nutrition outcomes, since other research has demonstrated that HFP can provide high quality nutrition (Galhena et al., 2013), including increasing fruit and vegetable consumption (Algert et al. 2016). As well, HFP can act as a buffer for households that are food insecure by providing them with additional food, and providing a main source of staple food for communities that live in areas where food is scarce (Niles et al., 2021). With the increasing literature about HFP and the potential for HFP to support

food security and increase nutritional diversity, additional research can explore the relationship of HFP to food and nutritional security, as well as diet and health outcomes over time, including during the COVID-19 pandemic.

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