

BACKYARD FARMING DURING COVID-19:

EXPLORING MICRO-SCALE HOME PRODUCERS CULTIVATION HABITS



2020

ABOUT CORNERSTONE ECONOMICS

During the high period of Covid-19 pandemic in 2020, Cornerstone Economics conducted a rapid assessment to identify the popularity of cultivation at home and determine the type of crops that are being cultivated.

DISCLAIMER

While every effort has been made to gather data from a diverse range of participants, it's important to note that the findings presented in this survey may not be fully representative of the entire population. The survey was conducted using social media, which may have introduced biases or limitations, particularly in terms of demographic representation. As such, while the insights gleaned from this survey provide valuable information, they should be interpreted with caution and may not accurately reflect the views or experiences of all individuals within the target population.

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BACKGROUND AND METHODOLOGY

The COVID-19 pandemic, which emerged in late 2019, has had far-reaching impacts on societies, economies, and daily life worldwide. As the pandemic unfolded, it underscored existing vulnerabilities in healthcare systems, highlighted disparities in access to resources, and accelerated the need for food security. With more people staying home due to lockdowns and social distancing measures, there was a growing recognition of the importance of cultivating one's own food to ensure food security.

It is then during the peak of the Covid-19 pandemic in 2020 that Cornerstone Economics conducted a rapid assessment to gauge the prevalence of home gardening and identify the types of crops that were being cultivated as well as the interest in micro-scale home cultivation of the residents in Aruba.

Methodology and limitations

The assessment involved a survey administered to a random sample of 213 residents in Aruba, comprising 10 closed-ended questions. The survey was distributed via social media platforms, leveraging the increased utilization of such platforms during the pandemic. It's worth noting that there may be a bias in the survey sample, as seniors might be underrepresented due to their potentially lower usage of social media compared to other age groups.

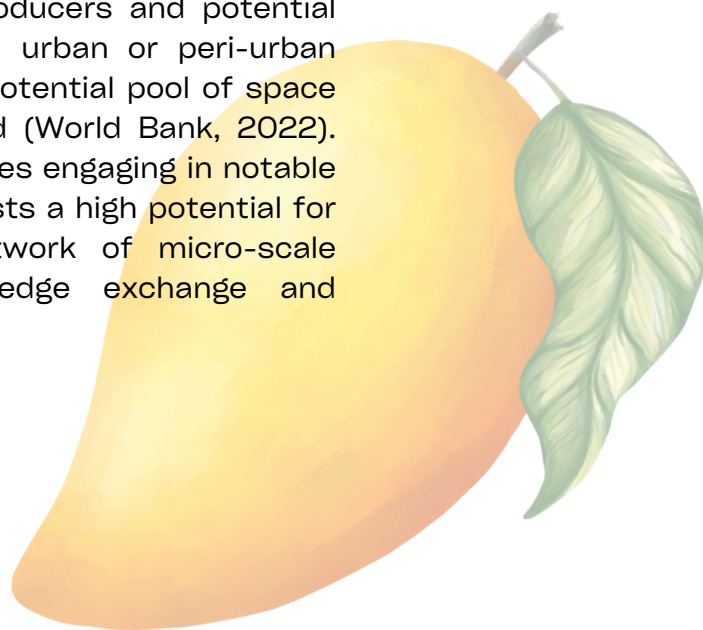
The responses are not necessarily representative of Aruba's age population. However, the insights gleaned from this survey provide valuable information, but should be interpreted with caution and may not accurately reflect the views or experiences of all individuals within the target population. The results may offer insights into the opinions, attitudes, or behaviors of the respondents who participated in the survey.

INTRODUCTION

Even before the onset of COVID-19, a combination of factors, including socio-economic conditions, natural hazards and climate change, had already contributed to a steady increase in chronic and acute hunger worldwide. The pandemic, acting as a catalyst, has further intensified these underlying issues, precipitating a profound and pervasive state of food insecurity, particularly exacerbating the severity of the situation in the Caribbean Small Island States (SIS) (WFP, 2022).

Aruba's food supply chain encounters significant vulnerability, given that more than 90% of its food is sourced through imports. This reliance on imported goods is further complicated by the necessity to accommodate the dietary requirements of both resident inhabitants and the nearly 2 million tourists who flock to the island each year.

Micro-scale home producers play a crucial role in this context, as highlighted by the World Bank (2022) and the analysis of widespread micro-scale residential producers. These producers, dispersed throughout Aruba, represent a vital component of the food security strategy. These backyard producers and potential producers operate on individual residential urban or peri-urban properties, collectively forming the largest potential pool of space adaptable to food production on the island (World Bank, 2022). Although the current percentage of residences engaging in notable food production is small, the analysis suggests a high potential for expansion. As participation grows, a network of micro-scale producers will emerge, fostering knowledge exchange and compounding the benefits and impacts.

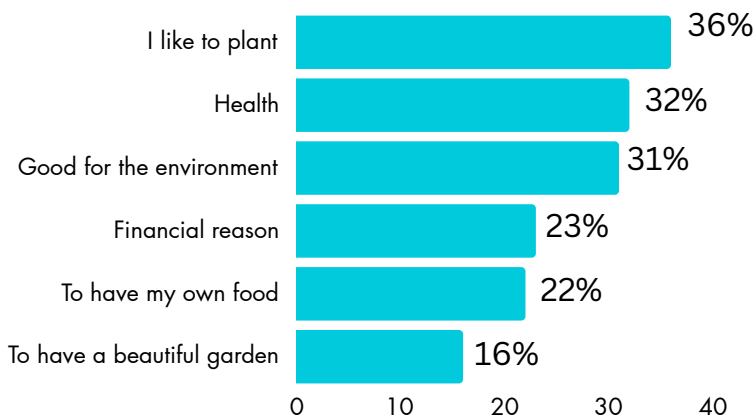


MORE THAN A HOBBY?

The results of our survey revealed that 36% of residents engage in gardening primarily as a hobby. Many people find joy and fulfillment in cultivating their own plants, viewing it as a leisure activity. Additionally, 32% of respondents cited health reasons as a driving factor, recognizing the nutritional benefits of consuming fresh, homegrown produce. For 22%, the reason is food security and for 23% of participants, gardening serves as a practical solution to financial constraints, while 16% simply enjoy the aesthetic appeal of maintaining a beautiful garden. It's important to note that respondents cited multiple benefits for planting, rather than a single primary reason.

Gardening and household cultivation is mostly considered as a hobby.

WHAT IS YOUR PRINCIPAL REASON FOR PLANTING?



The onset of lockdowns, curfews, and other COVID-19 containment measures prompted a significant shift in behavior. With newfound free time and a desire for productive activities, many turned to gardening as a rewarding pastime. This surge in interest led to unprecedented demand for gardening supplies, resulting in shortages and surging sales for garden retailers (Brecks.com, 2020).



FINANCIAL IMPACT ON HOUSEHOLDS

Gardening offers a convenient, healthy and cost-effective way to produce food, providing individuals with the satisfaction of harvesting their own fresh produce. Moreover, tending to a garden can contribute to improved mental well-being, offering a creative outlet and serving as a form of physical exercise.

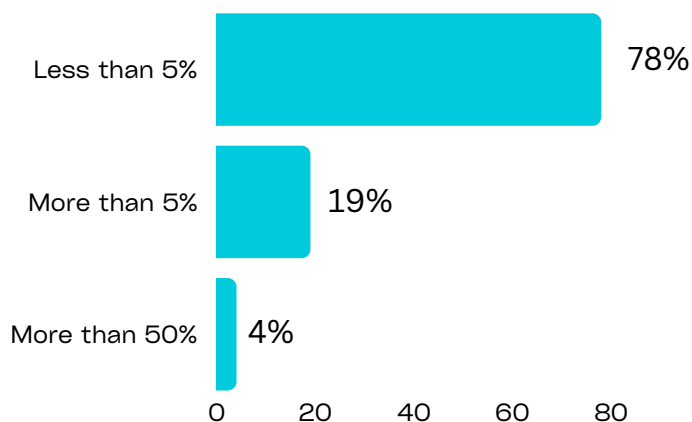
A majority of individuals (78% or 163) indicated that gardening does not constitute a substantial income source for them, with fruit and vegetable cultivation accounting for less than 5% of their income. Conversely, 19% acknowledged that their household produce has a more significant financial impact, while only eight respondents (4%) reported gardening as contributing over 50% of their total income.

Micro-scale home producers' cultivation enhances economic resilience by reducing household food expenses, allowing families to allocate savings to other critical needs or investments.

It creates opportunities for supplemental income through the sale of surplus produce, contributing to financial stability and local economic growth.

Furthermore, it mitigates the financial risks associated with supply chain disruptions, providing a buffer against inflation and food price volatility.

WHAT PERCENTAGE OF YOUR INCOME COMES FROM YOUR HOUSEHOLD PRODUCE?

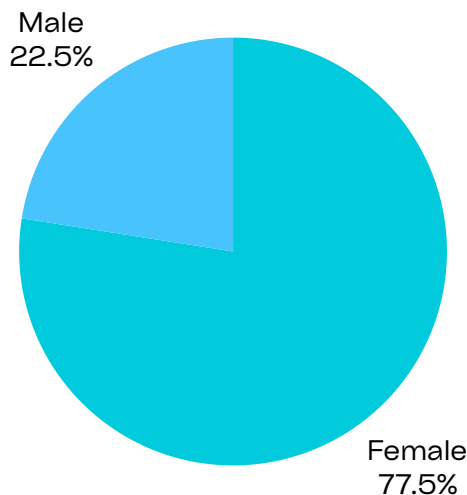


A majority of individuals (78% or 163) indicated that their household produce does not constitute a substantial income source for them.

WOMEN CULTIVATING AT HOME

The primary force behind food production in Aruba is female, with 77% of respondents who grow food at home being women, compared to 23% who are men. This trend aligns with Caribbean and South American cultures, where women traditionally play a critical role in providing nutrition for their families, spanning from early childhood to adulthood. This is often due to their higher presence in the household and their daily responsibilities, which commonly include caring for family members. This finding is consistent with the preference for gardening as a hobby.

WOMEN VERSUS MEN: WHO GARDENS MORE?



Receipts and knowledge, whether for food ingredients or medicinal plants, have been passed down through generations and will continue to be shared with their daughters. This reaffirms the significant role that women play in contributing to Aruba's agricultural development, emphasizing the importance of gender-sensitive policies and training initiatives.



Favored and cultivated fruits, herbs and vegetables

Most respondent cultivated at least three different types of fruits, vegetables or herbs.

Food production on small islands is often less developed compared to larger islands or countries. However, with the privilege of 365 sunny days, gardening in Aruba becomes easily feasible. Among 213 respondents, more than 80 different varieties of fruits, herbs, and vegetables were planted during Covid-19, with each respondent cultivating at least three different types of fruits or herbs in their backyard.

Top 4 produce cultivated in Aruba's backyards

Tomatoes

Tomato, with 181 individuals (85%), was the most cultivated vegetable in Aruba as per sample responses.



Peppers

Peppers was the second most cultivated, representing 65% (139) of respondents.



Papaya is the third most cultivated food in backyards, accounting 59% of households.



Papaya

Limes is in the top four, accounting for 55% of households.



Limes













WHAT'S BEING CULTIVATED IN BACKYARDS?

It is also noteworthy that fruits and herbs with short harvest periods are preferred. For example, tomatoes and peppers can be harvested in approximately 90 days. Coupled with their ease of seed germination and the small space required for their cultivation, these two products are staples in daily menus in Aruba.

Fruit trees such as Papaya (59%), Limes (55%), Mango (51%), Shimaruku (32%), Medlar (26%), Guava (24%), Cashews (29%), and Pomegranate (24%)—which can take years to harvest—hold significant importance in this survey. An intriguing finding is the cultivation of Avocado, one of the most consumed products not only in Aruba but globally, by 80 (38%) respondents. While avocado trees can thrive in excessively hot and arid climates, they are less likely to bear fruit, typically taking around 7 years for the first fruits to appear. Regardless of the longer harvest period, the avocado is obviously a desired food for households to cultivate.

The Cucurbits or Cucurbitaceae represent a significant portion of the entire survey. These plants are known for being a family of typically climbing plants. In Aruba, the most commonly planted Cucurbits include Pumpkin (54%), Watermelon (73%), Cantaloupes (31%), Cucumbers (22%), and Zucchini (6%).

Top 3 cultivation of vegetables, fruits, cucurbits and herbs

Vegetables	Fruits	Cucurbits	Herbs
Tomato 	Papaya 	Pumpkin 	Basil 
Peppers 	Lime 	Watermelon 	Mint 
Cucumber 	Mango 	Cantaloupes 	Cilantro 

20 TYPES OF HERBS CULTIVATED

On the other hand, the results reveal that over 20 different types of herbs are cultivated in Aruba. The most commonly cultivated ones include Basil (69%), Mint (68%), Cilantro (61%), and Oregano (55%), with 147, 144, 130, and 118 individuals respectively. Additionally, plants like Spinach (42%), Kale (37%), and Lemongrass (34%) also have significant representation.

Herbs are undoubtedly essential for the horeca sector, yet they pose a significant challenge due to the high standards required for shipping containers to ensure fresh produce reaches Aruba.

An interesting finding is the cultivation of lettuce, with 112 individuals or 53% of respondents. It's worth noting that 10 different types of lettuces have been grown indoors for commercial use by three startups.

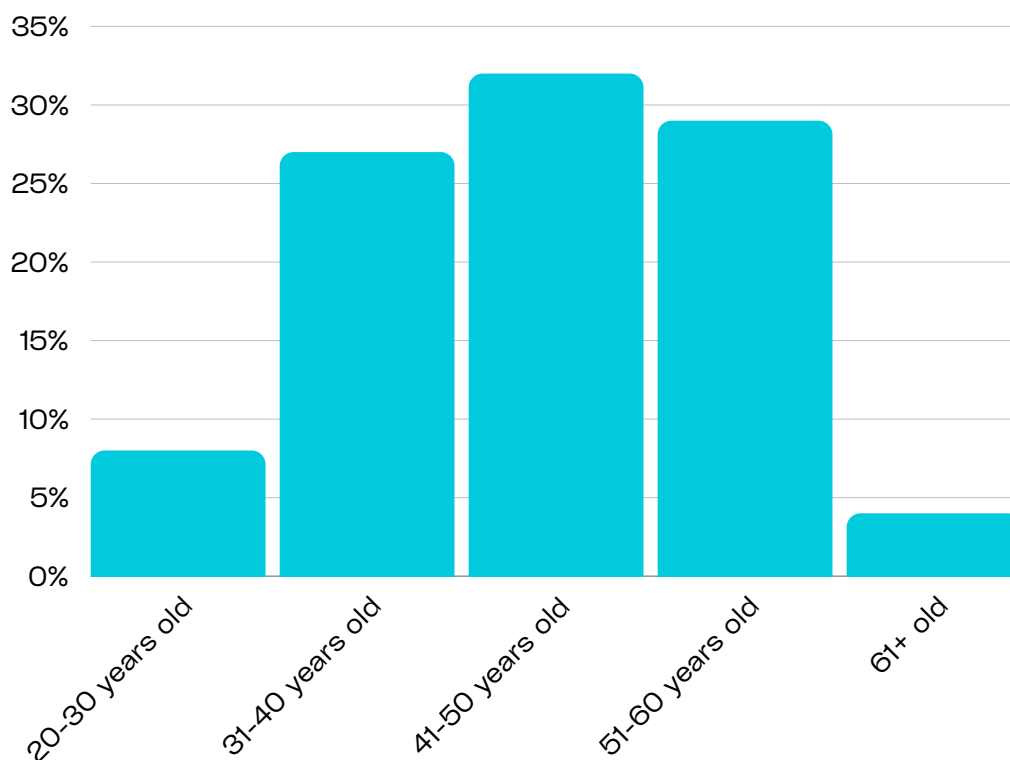
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The majority of food growers are between 41 and 50 years old, comprising 32% of respondents, followed closely by individuals aged 51 to 60 at 29%. Those aged 31 to 40 represent 27% of the respondents. Surprisingly, a notable proportion of younger individuals, aged 30 and under, engage in home food gardening, accounting for 8%, while only 4% are over 61 years old.

Age Distribution of Food Growers in Aruba

Food growers in Aruba span a wide age range, with the majority falling between 41 and 60 years old, although there is notable participation from younger demographics.



Local farmers important for households

Of the 213 people surveyed, 131 individuals (61%) obtain their produce directly from local farmers, while 38% purchase these local products from retail stores and 1% import directly from abroad.

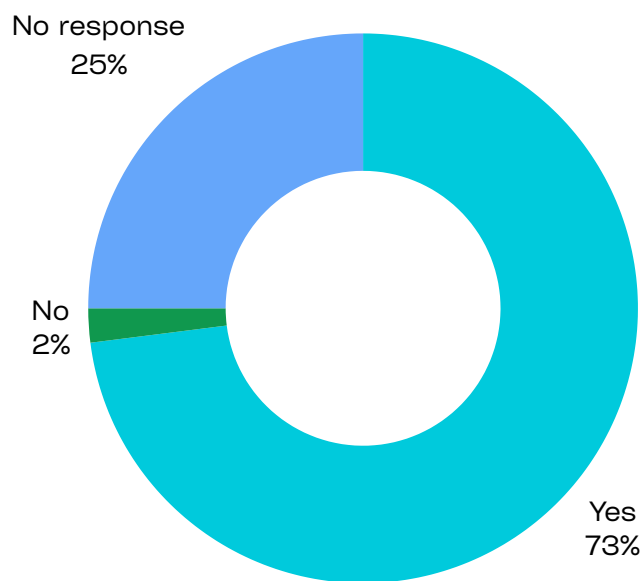


61%

Obtain their produce directly from local farmers.

Despite the high level of involvement of participants in cultivating produce in their backyards, a significant percentage (73%) indicated the need for educational assistance on the topic of cultivation.

There is a high need for educational assistance on the subject of cultivation at home



Households rated themselves average for the skills of cultivating produce at home

The respondents rated their gardening or cultivation skills with an average score of 2.9 on a scale of 1 to 5, where 1 represents very low skills and 5 represents very high skills.

CONCLUSION

While Aruba will continue to rely heavily on imports of fruits and vegetables, there has been a noticeable shift in mindset in recent years, accelerated by the COVID-19 pandemic. People have increasingly recognized the importance of enhancing the island's self-sufficiency in terms of food security. The results of this survey confirm a growing interest towards local production and consumption.

Gardening primarily as hobby

Gardening in Aruba is primarily driven by the hobbyist aspect rather than for significant financial gain.

We want avocado

Avocado cultivation, despite its longer harvest period, remains popular among households.

Women drivers of cultivation at home

Women play a dominant role in food production at home, aligning with cultural norms and daily activities.

Cucurbits popular both for household and commercial

Cucurbits and herbs are widely cultivated, serving as essential products for both household and commercial use.

Favorable weather with preference for short harvest

The favorable climate in Aruba supports a diverse range of fruits, herbs, and vegetables being grown by respondents, with short harvest periods being preferred.

Growing trend in technology-driven agriculture

Startups are contributing to indoor lettuce production, indicating a growing trend in technology-driven agriculture.

Young demographic highly interested in cultivation

Food growers in Aruba span a wide age range, with the majority falling between 41 and 60 years old, although there is notable participation from younger demographics.

High need for education

A high need by cultivators at home has been identified.

Great majority buy produce from local farmers

We'd like to thank all
survey participants for
their contribution.

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TRANSFORMING
SOCIETY**