



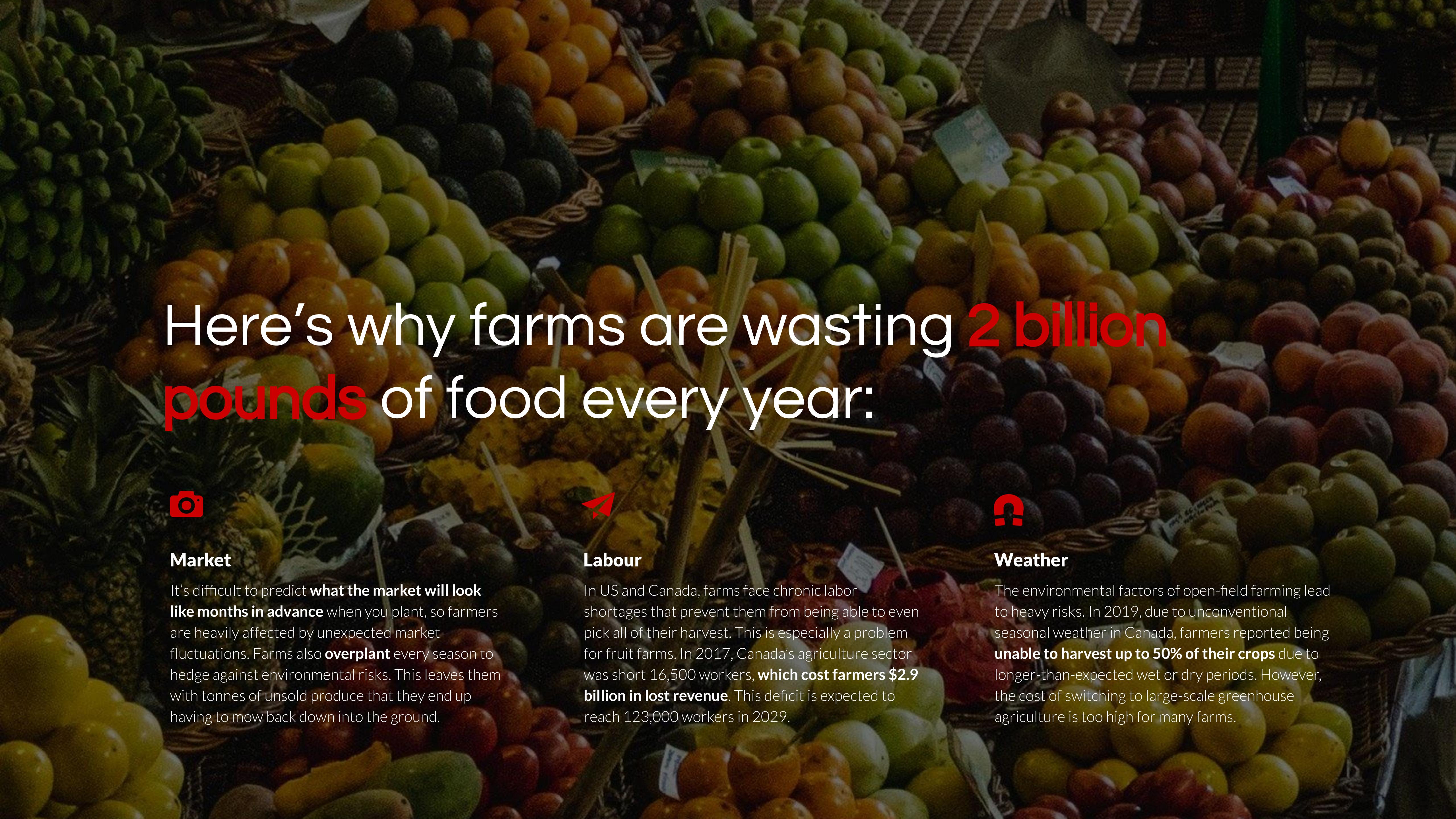
# FreshStop

Solving farm-level food waste  
in developed countries

WBP

Ramy, Khushi, Mishaal

01



# Here's why farms are wasting **2 billion pounds** of food every year:



## Market

It's difficult to predict **what the market will look like months in advance** when you plant, so farmers are heavily affected by unexpected market fluctuations. Farms also **overplant** every season to hedge against environmental risks. This leaves them with tonnes of unsold produce that they end up having to mow back down into the ground.



## Labour

In US and Canada, farms face chronic labor shortages that prevent them from being able to even pick all of their harvest. This is especially a problem for fruit farms. In 2017, Canada's agriculture sector was short 16,500 workers, **which cost farmers \$2.9 billion in lost revenue**. This deficit is expected to reach 123,000 workers in 2029.



## Weather

The environmental factors of open-field farming lead to heavy risks. In 2019, due to unconventional seasonal weather in Canada, farmers reported being **unable to harvest up to 50% of their crops** due to longer-than-expected wet or dry periods. However, the cost of switching to large-scale greenhouse agriculture is too high for many farms.

A close-up photograph of a large pile of ripe red grapes. The grapes are clustered together, showing various shades of red and some green stems. The lighting highlights the texture and juiciness of the fruit.

## Market-related food loss and **COVID-19**

Due to the pandemic, farms have been dumping and plowing down up to 80% of their harvests, as compared to the usual 20%. **1/3 of small farmers saw a 51.3% average drop in revenue** over March and April compared to last year's figures.

**The Counter**

## Who's getting hit the hardest?



### **Small**, family-owned farms

Farms ranging anywhere from 50 to 300 acres and who primarily rely on farmers' markets for sales are taking a hit



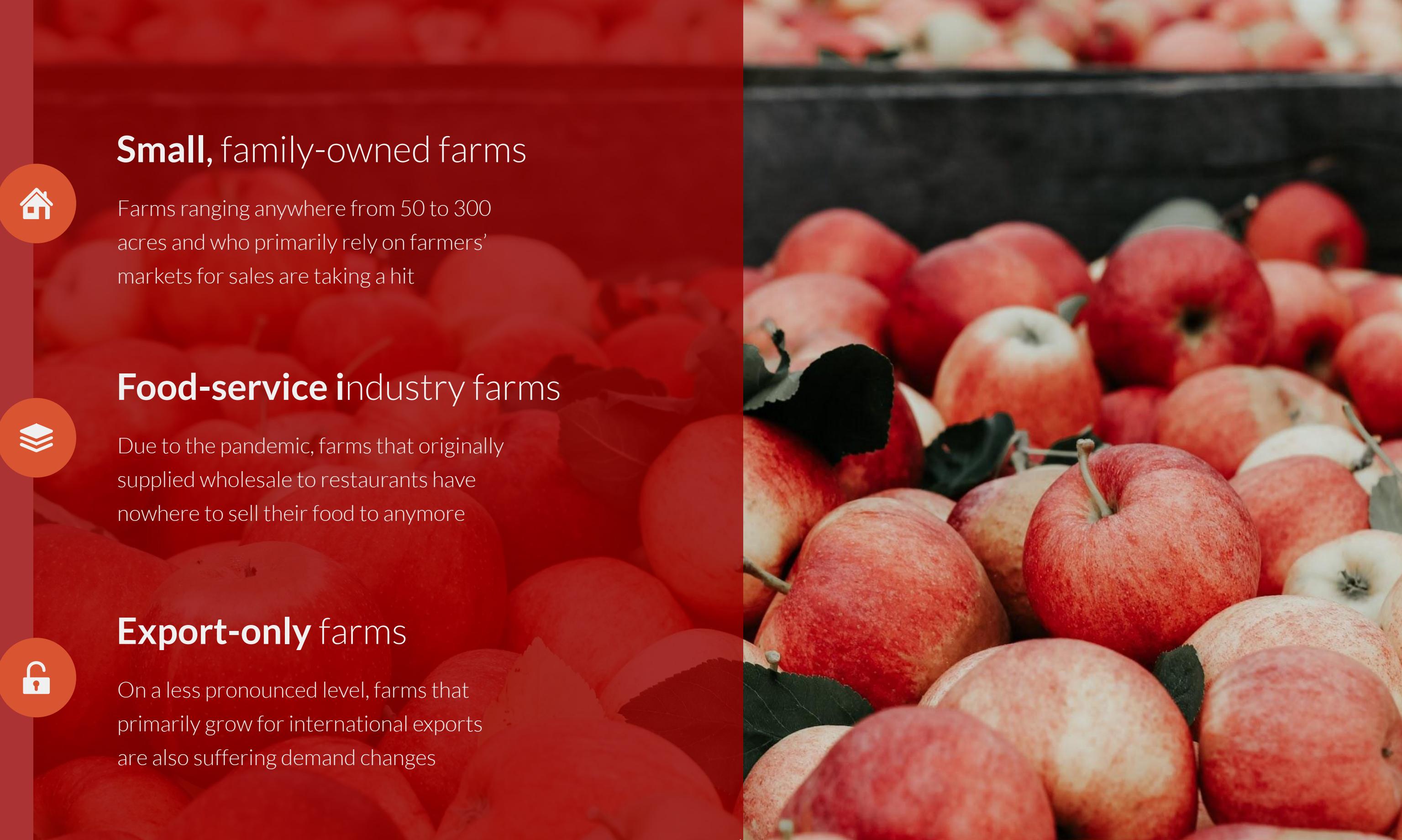
### **Food-service** industry farms

Due to the pandemic, farms that originally supplied wholesale to restaurants have nowhere to sell their food to anymore

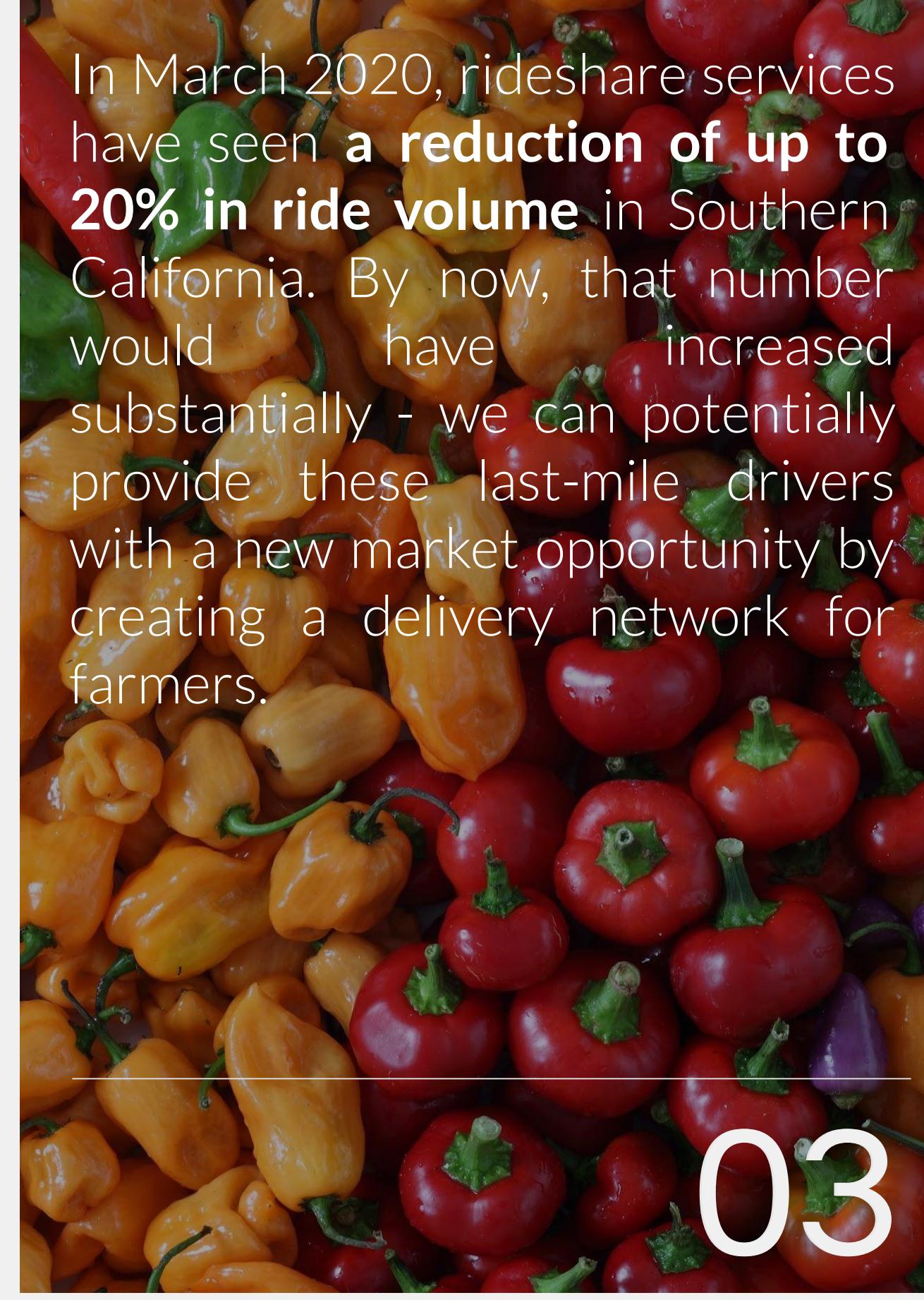
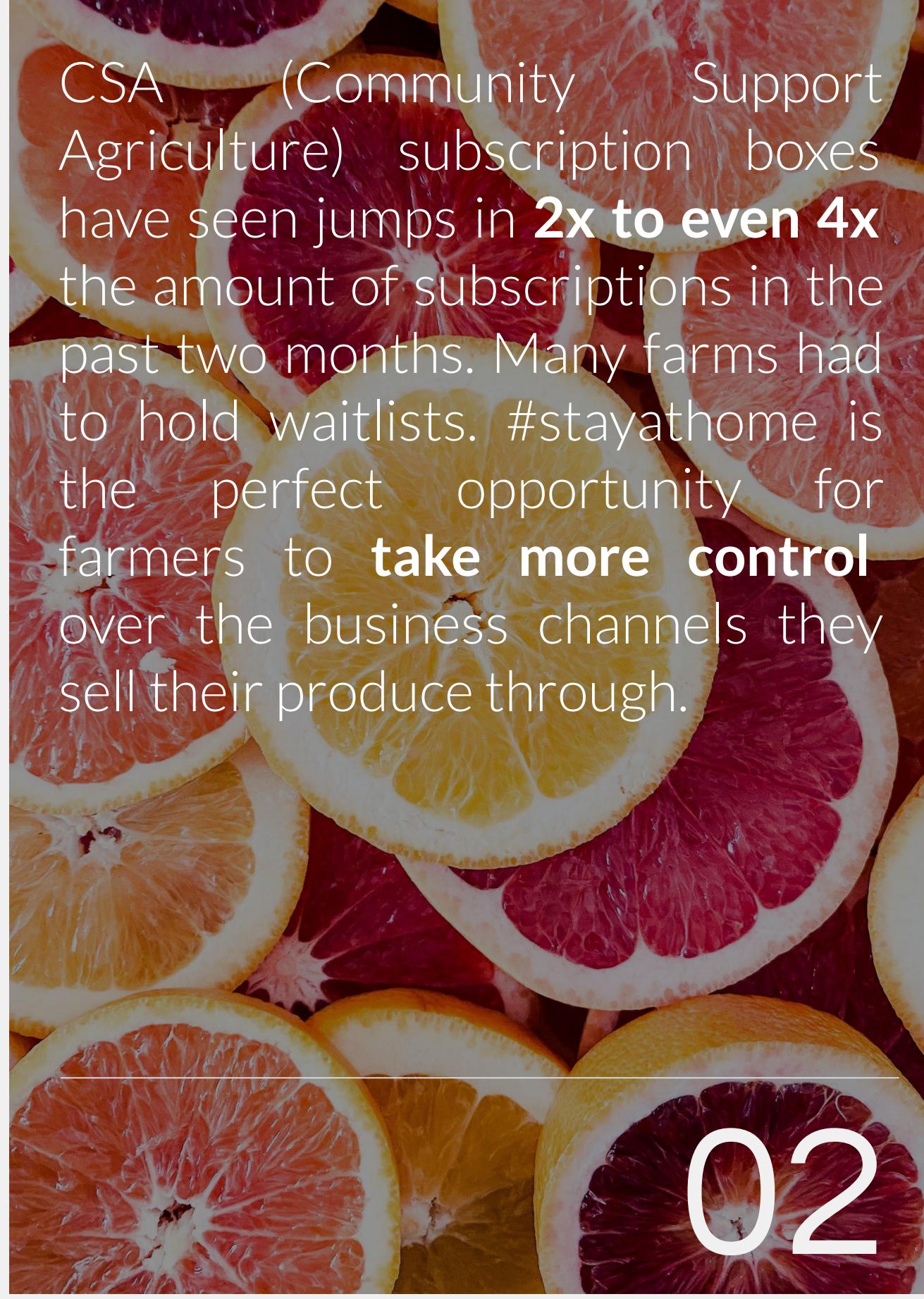


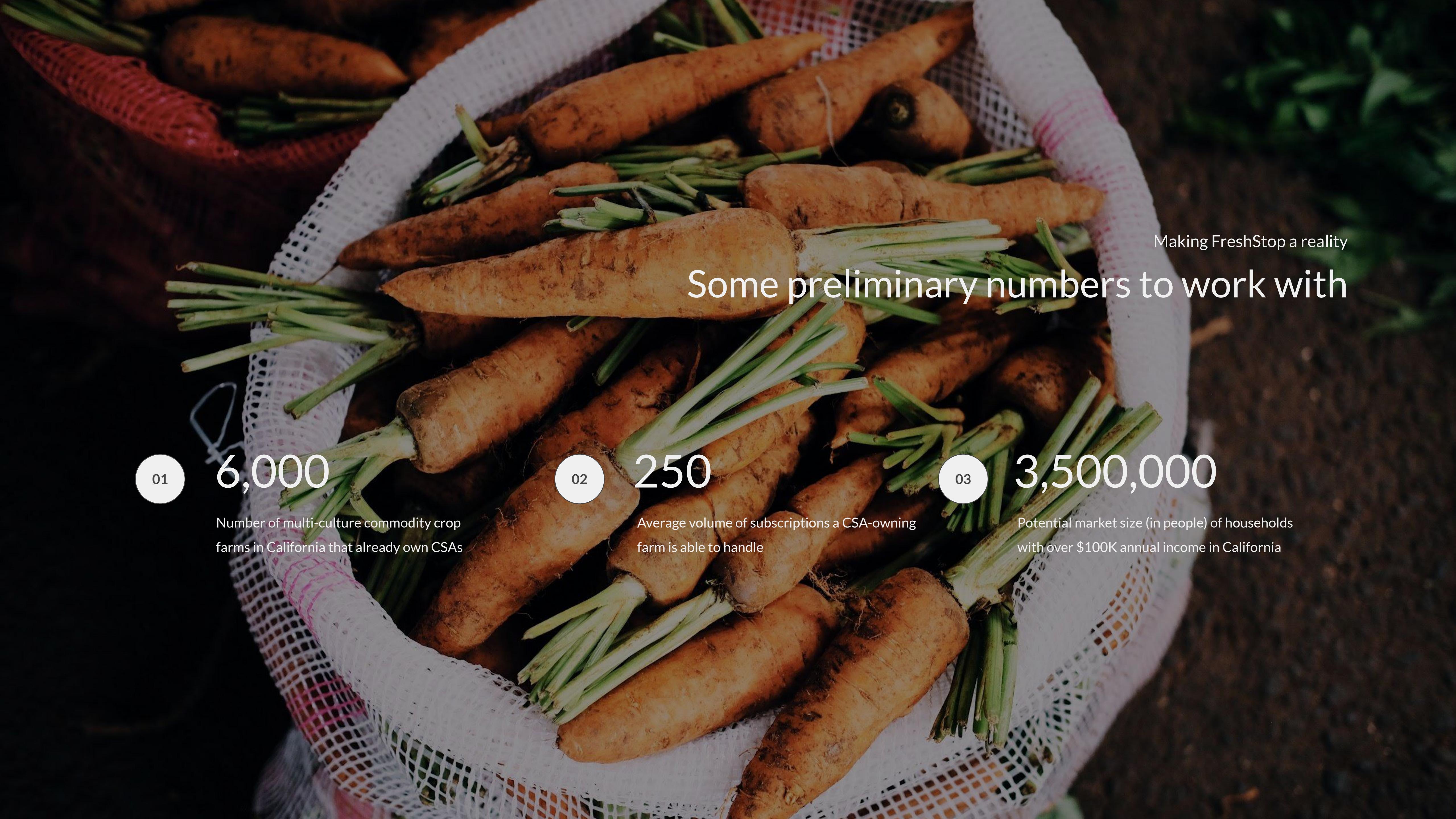
### **Export-only** farms

On a less pronounced level, farms that primarily grow for international exports are also suffering demand changes



## D2C e-Commerce: The Opportunity for Farms





Making FreshStop a reality

## Some preliminary numbers to work with

01

**6,000**

Number of multi-culture commodity crop farms in California that already own CSAs

02

**250**

Average volume of subscriptions a CSA-owning farm is able to handle

03

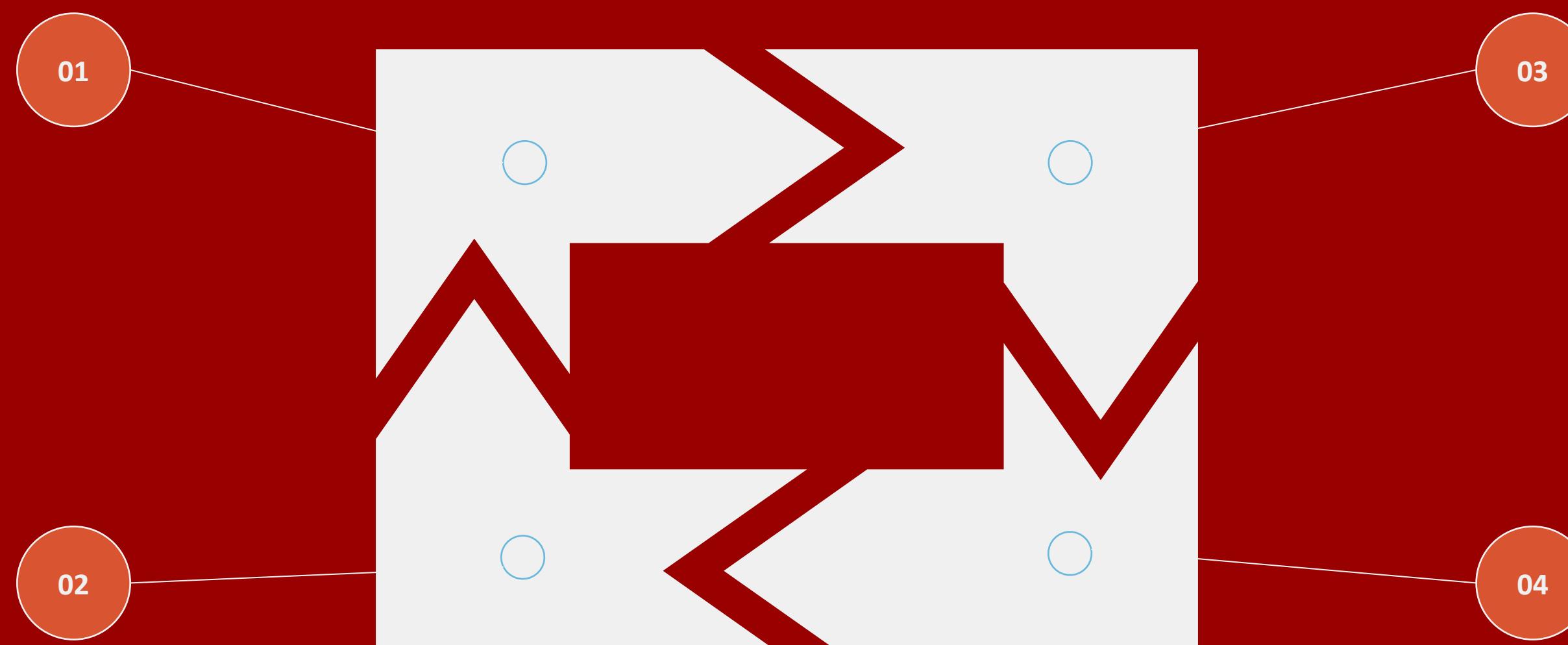
**3,500,000**

Potential market size (in people) of households with over \$100K annual income in California

## How the platform would work

### Farms list their boxes

Farmers update the FreshStop platform with harvest estimates and picklists every couple of days and a stock of boxes is calculated, making them available for orders



### Driver delivers the box

After the farm has harvested the produce and packed it for the user, a nearby rideshare driver will be recruited to pick up the box and deliver it

### User purchases a box

User chooses a box to purchase, inputs their address, and selects whether they'd like it to be a one-time purchase, a single-farm subscription, or a rotating subscription

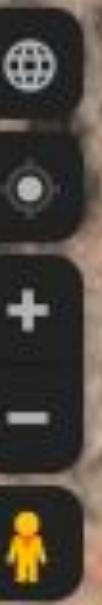
### User receives the box

The user receives their box within the day or 2 days, gives the farmer a rating on the FreshStop platform

# The Central Valley

Google

77,500 farms  
#1 most productive region  
\$21B in exports in 2018  
400 different commodities



# IMPACT

**1.25M**

on average a farm can service 250 subscribers at any one time. that's a lowball estimate of **1.25M potential boxes delivered every week.**

**450K**

Uber has around 450K drivers in California. As of March 15th, Uber requests have declined by over 20% in California, and that number has likely increased as the months of social distancing have gone by.

**3.9M**

There's around 13M households in California, ~30% of which have ~100K household income, which means **~3.9M buyers of viable market to tap into in California**

**1300**

On average, farms have been up in subscriptions by at least 2x throughout COVID-19, most of them have quadrupled



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I am a 16 y/o AI developer - I've developed and implemented ML algorithms for lie detection in courts, chatbots, and more. Currently @ Zappos, previously @ TD.



## Mishaal Lakhani

I am a 17-year-old machine learning and virtual reality developer. Previously @ CIBC. Currently going deep into alternative proteins and cellular agriculture.



## Ramy Zhang

I'm a first year in the University of Toronto CS program. I'm a blockchain enthusiast, Dapp builder and passionate about femtech. Previously @ Deloitte, U.CASH.