



Lettuce Solve The Problem

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HISTORIC SHORTAGE OF LETTUCE

Next time you pull up to your favorite fast food chain, your meal might look a little less green. And that's because many restaurants have been hit with a lettuce shortage, along with shockingly high prices for salad, which is now trickling down to customers.

Chains like Taco Bell, Chick-fil-A, and Panera have all been forced to display messages about the shortage, per Business Insider, warning customers that due to the industry shortage, they may be out of the ingredient at certain locations.

Per the outlet, Taco Bell's rep said that the warning comes out of an "abundance of caution" and that they are currently getting all of their shipments.

Key Facts

Romaine lettuce accounts for 30% of the lettuce consumed in the United States. Between 1990 and 2009, per capita consumption increased from 1.2 to 7.7 pounds per person.

Although contamination of marketplace product is rare, between 1998 and 2018, at least 34 romaine lettuce-associated outbreaks were reported to CDC's National Outbreak Reporting System (NORS), causing 1,040 illnesses, 256 hospitalizations, and 5 deaths.

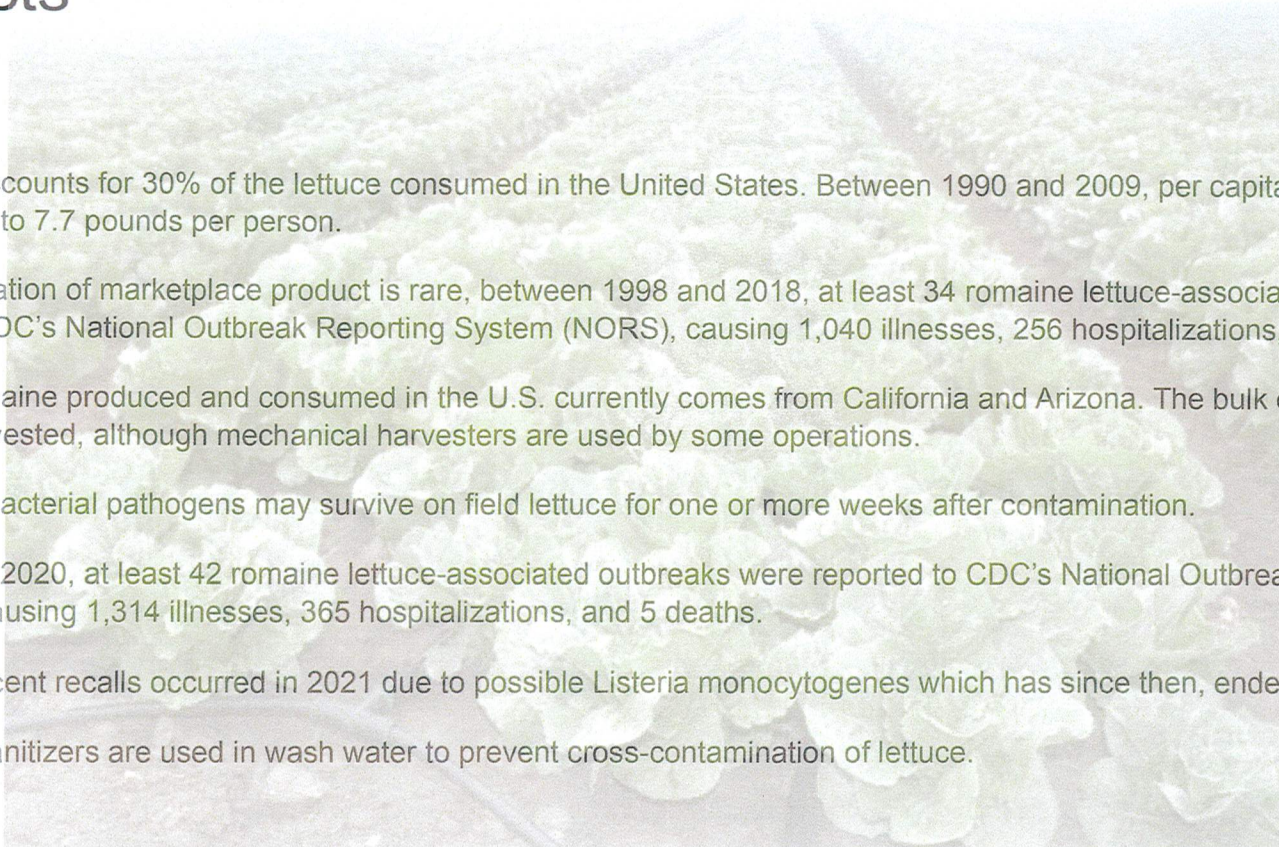
The majority of romaine produced and consumed in the U.S. currently comes from California and Arizona. The bulk of romaine lettuce is hand harvested, although mechanical harvesters are used by some operations.

Small numbers of bacterial pathogens may survive on field lettuce for one or more weeks after contamination.

Between 2000 and 2020, at least 42 romaine lettuce-associated outbreaks were reported to CDC's National Outbreak Reporting System (NORS), causing 1,314 illnesses, 365 hospitalizations, and 5 deaths.

One of the most recent recalls occurred in 2021 due to possible *Listeria monocytogenes* which has since then, ended.

Chlorine or other sanitizers are used in wash water to prevent cross-contamination of lettuce.



Solution: Vertical Farming

- When it comes to leafy greens, Tower Garden technology is second to none. From increased crop yields to a superior nutrient density, and from higher levels of antioxidants and flavonoids to increased shelf life, growing lettuces on a Tower Garden will produce exceptional results.
- Fast-growing, and can be ready to harvest in as little as 3 weeks.
- One of the healthiest vegetables you can eat, offering vitamins A, K and other nutrients.
- Easy to grow—a perfect choice for indoor farming.



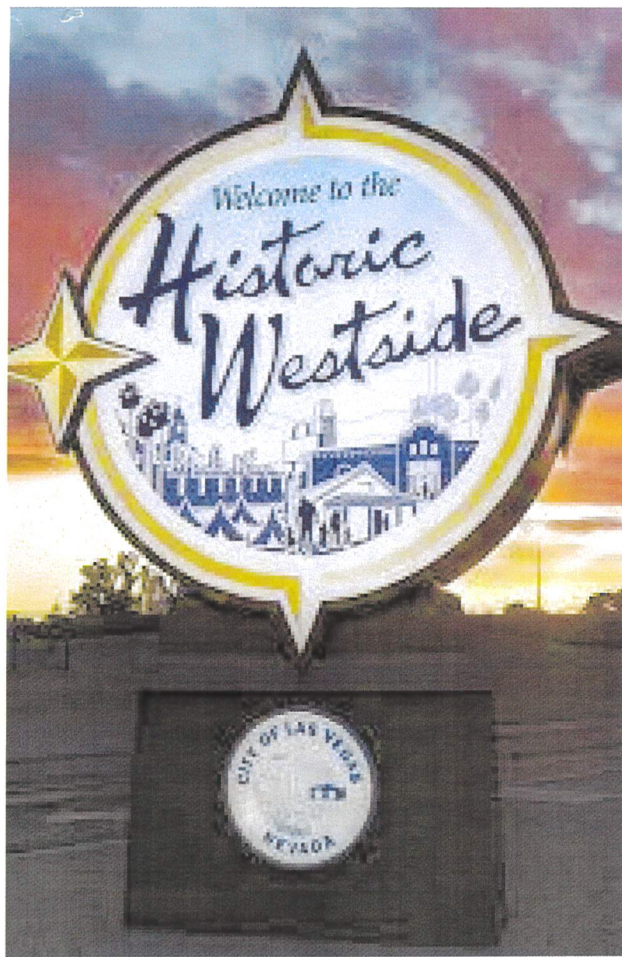
The Plan

- We start by installing our vertical systems inside of a local grocery store.
- In partnership with the grocery store we supply them with onsite leafy greens
- We eliminate:
 - Food miles
 - Storage
 - Waste
 - Shipping
 - # of Vendors and Purchase orders
- We are able to grow 360 days per year
- We provide locally grown produce for a food desert.

53 Towers 11 pots tall = 2,332 planting ports

Local Demand: The Market

- There is unfulfilled demand for local food in Nevada. This demand can be filled by addressing a series of gaps in knowledge and logistics that prevent a larger scale of production and supply of local food and by educating the market that the products they desire can be grown in the desert. If a farm-to-market system is established, a local food system can be developed into a strong new industry for Nevada.
- The state of Nevada imports \$93.8 million of vegetables and melons and \$195 million worth of fruits every year (Harris, 2019). The majority of this food goes to Las Vegas to feed 38.9 million annual visitors (2019) beyond the 1.9 million residents (Las Vegas Convention & Visitors Authority, 2019). If local production could replace 5 percent of the vegetable and melon imports, then a \$4.69 million industry can be established.
- Las Vegas consumers and chefs desire and are willing to pay premium prices for fresh, high quality local foods (Cowee et.al, 2009). These markets have developed in the last 10 years with the creation of food excellence restaurants as part of destination casinos and with the rapid population growth. These newcomers do not know that quality local foods can be grown by Nevada farmers.



Many inner city low income areas have been defined as having limited access to fresh food. These areas, referred to as having “low income and low access” to healthy food, are delineated by the USDA Food Access Research Atlas. Due to the lack of access to healthy foods, defined as fresh fruit and vegetables, meat, seafood, dairy producers and a broad selection of dry groceries, these neighborhoods are plagued with poor public health including obesity, type II diabetes, and cardiovascular problems.

The COVID-19 pandemic exasperated these issues, finding that household food insecurity increased by over 32 percent during the pandemic (Niles et al. 2020).

Our solution is to develop a community driven vertical farm industry complete with education, internships and business ownership, thereby giving the community the tools to solve its own food problem, that will also increase access to local produce for the city of Las Vegas and beyond.

Local Vertical Farming



**DELIVERING TURNKEY
FARMING SOLUTIONS IN
THE DESERT**

WWW.GREENSIDEUP.FARM



There's over \$400 million in USDA funding to purchase locally grown produce!

- **THESE ARE THE ONLY AEROPONIC SYSTEMS WHICH CAN BE USED INDOORS OR OUTDOORS**
- **TOWER FARMS CAN BE SETUP IN A GREENHOUSE OR INSIDE A BUILDING USING GROW LIGHTS**
- **PERFECT FOR PROFESSIONAL GROWERS, CHARITIES, COMMUNITY GARDENS, STARTUP BUSINESSES, RESTAURANTS, HOTELS, SCHOOLS, CAFETERIAS, CONVENTION CENTERS, BUILDING ATRIUMS & LOBBIES, AIRPORTS, LARGE FAMILIES, ETC**
- **TOWER FARMS ALSO THRIVE ON ROOFTOPS AND ARE DESIGNED TO SUSTAIN STRONG WINDS IN HEAVY STORMY CLIMATE CONDITIONS!**