

#### Unlocking the Potential of Cold Storage and X-Ray Food Irradiation in the USA

An introductory overview of the growing demand for food imports/exports and the market opportunity for X-ray food irradiation systems in the USA.

### The Growing Demand for Food Imports and Exports



### Increasing Nut Imports and Exports

The USA is a major importer and exporter of various nuts, such as almonds, walnuts, and pistachios, driven by growing global demand.



#### **Booming Spice Trade**

Spice imports and exports to and from the USA have seen significant growth, reflecting the diverse culinary preferences and expanding global reach.



## Thriving Fruit and Vegetable Market

The USA both imports and exports a wide range of fresh and processed fruits and vegetables, catering to evolving consumer tastes and dietary trends.



#### **Increasing Seafood Trade**

The USA is a major player in the global seafood market, with growing imports and exports of various fish and shellfish products.

### The Phytosanitary Market Opportunity

Product Type	Loads per Day
Fresh Fruits	5,000
Fresh Vegetables	4,500
Nuts	2,800
Spices	1,700
Seafood	3,000

<sup>\*</sup>Data sourced from the United States Department of Agriculture (USDA) and the International Trade Administration (ITA).

#### X-Ray Irradiation Locations Needed to Cover the Market

Analyze
Phytosanitary
Market Size

Assess Irradiation Facility Capacity Calculate Required Facility Coverage

Identify Strategic Locations

Highlight Growth Potential

Determine the total volume of the US phytosanitary market, measured in the number of 40,000 lb. loads per day, to establish the scale and scope of the opportunity.

Evaluate the typical capacity of an X-ray irradiation facility in terms of the number of 40,000 lb. loads it can process per day to understand the required facility coverage.

Divide the total phytosanitary market size by the individual facility capacity to determine the number of X-ray irradiation locations needed to cover the US market 100%.

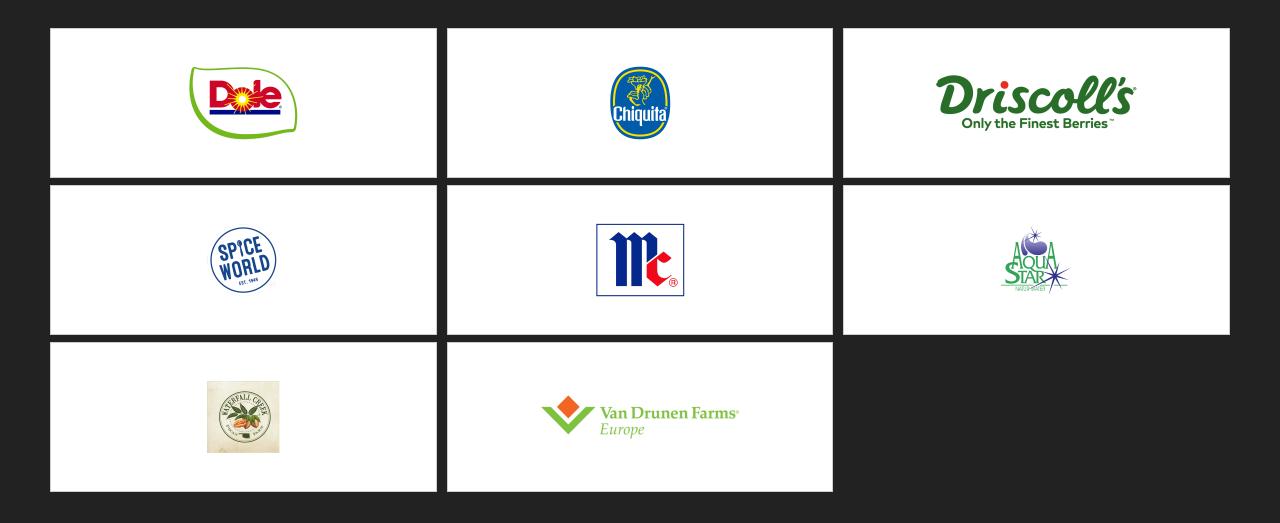
Recommend the optimal geographic distribution of X-ray irradiation facilities across the US to ensure comprehensive coverage and efficient logistics for the phytosanitary market.

Emphasize the longterm growth opportunities and scalability of the Xray irradiation network as the phytosanitary market continues to expand.

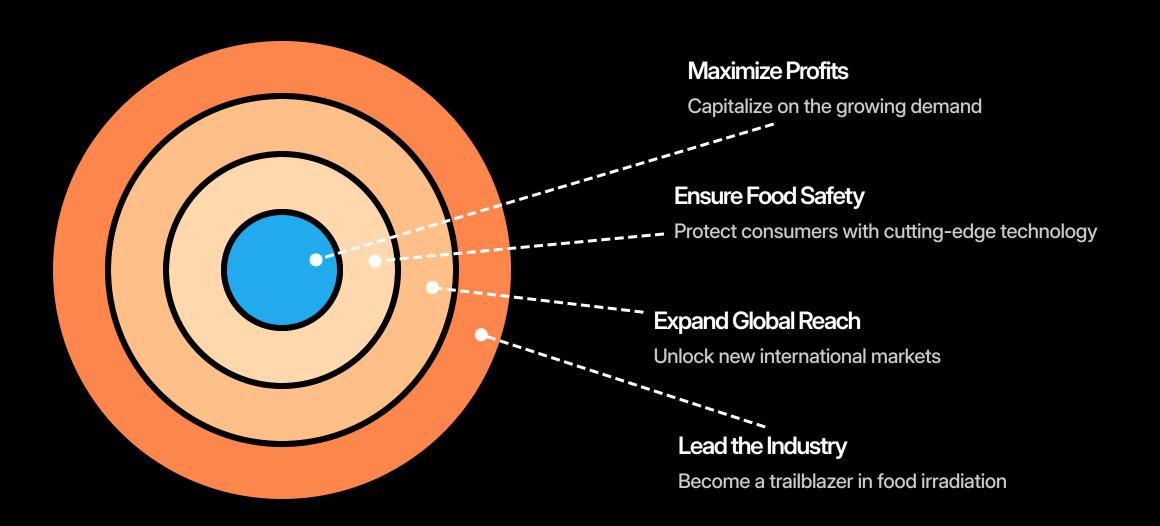
#### The Benefits of X-Ray Food Irradiation

X-ray food irradiation is a powerful technology that offers numerous benefits to the food industry. By exposing food products to controlled levels of ionizing radiation, this process can effectively eliminate harmful pathogens, extend shelf life, and enhance food safety without compromising nutritional value or taste. Adopting this innovative solution can lead to significant improvements in quality control, supply chain efficiency, and consumer confidence.

#### Industry Leaders Endorse X-Ray Irradiation



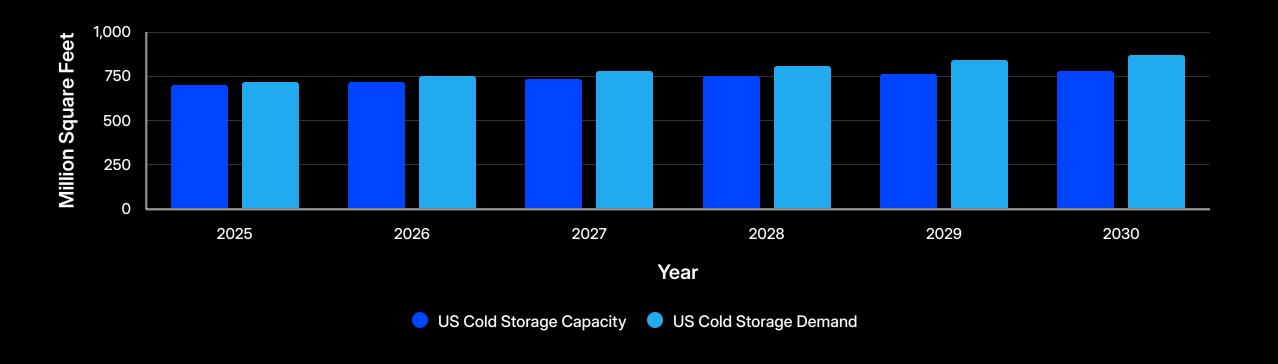
## Investing in the Future of Food Safety



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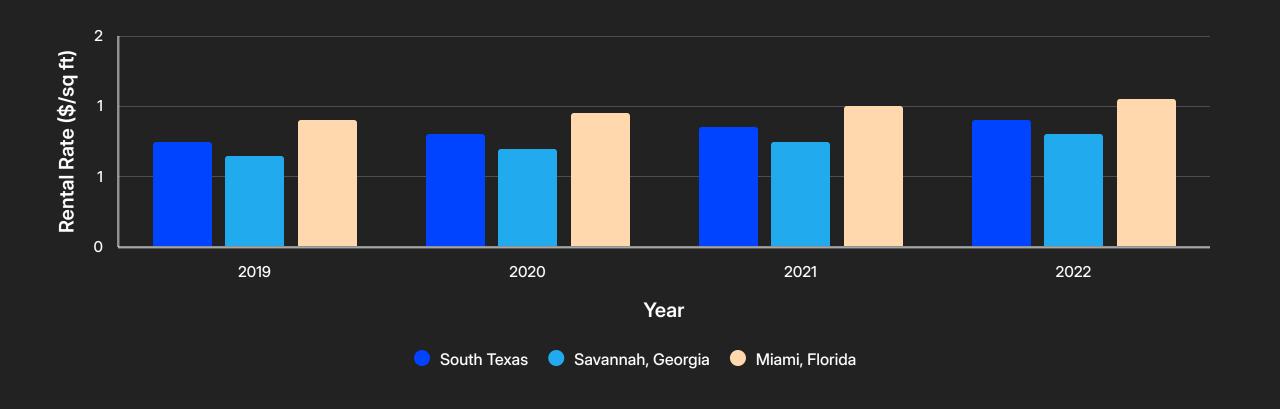
The growing demand for imports and exports of various food products, such as nuts, spices, fruits, vegetables, and seafood, presents a significant market opportunity in the phytosanitary sector. To meet this demand, strategically placed X-ray food irradiation facilities are needed to ensure the safety and quality of these products.

#### US Cold Storage Deficit and Future Capacity Needs



The US is facing a cold storage deficit, with demand outpacing capacity. An estimated 90-100 million square feet of additional cold storage space needs to be built by 2030 to meet the growing demand.

#### **US Cold Storage Market Rental Rates**



The US cold storage market rental rates are generally higher in Miami, Florida compared to South Texas and Savannah, Georgia.

## Profitability of 3PL and X-ray Irradiation Services in a 300,000 SF Cold Storage Facility



The data suggests that both 3PL services and X-ray irradiation services in a 300,000 SF cold storage facility have been increasingly profitable over the past 5 years.