

# Windset Farms

## Cultivating Circularity to Cut Food Loss and Waste



### Company Overview

Windset Farms is a major North American producer of greenhouse-grown vegetables with operations in British Columbia, California, and Mexico. Operating within the grower and shipper segment of the supply chain, Windset is committed to sustainable agriculture practices that reduce food loss and waste while maintaining high standards for product quality. The company supplies tomatoes, peppers, cucumbers, and lettuces to retailers and food service partners.

### The Solution

Windset Farms tackles food loss and waste through a holistic circular food system approach that addresses waste at every stage—from pre harvest, to harvest through packing and distribution. By integrating advanced crop allocation and forecasting technology, Windset gains real-time insights into produce quality and waste generation across its supply chain.

Complementing technology, Windset invests in innovative packaging solutions designed to extend shelf life and reduce spoilage, balancing environmental considerations with performance needs.

Surplus edible produce is donated to local food banks, supporting community food security, while byproducts and non-edible plant material are repurposed into animal feed or compost, creating a closed-loop system that returns nutrients to the soil. Key elements of Windset's approach include:

- **Surplus Donation:** Regularly donating edible surplus produce to local food banks and community organizations.
- **Upcycling & Composting:** Repurposing byproducts and non-edible plant material into nutrient-rich animal feed and compost, closing resource loops and enhancing soil health.
- **Innovative Packaging:** Developing eco-friendly packaging using recycled content that extends product shelf life, reducing spoilage and waste throughout the supply chain.
- **Measurement & Transparency:** Utilizing advanced forecasting and real-time monitoring to align production with demand and proactively reduce food waste.

"Advanced forecasting and real-time insights allow us to match production to demand, preventing waste before it happens rather than reacting after the fact.

— Jeff Madu, Senior VP Operations, Windset Farms

#### **Where Loss Occurs**

Greenhouse farms & packer/shippers across BC, California, Mexico

#### **Main Drivers**

Supply-demand imbalances, cosmetic standards, perishability, packaging gaps

#### **Solutions**

Surplus donation, animal feed & composting, innovative packaging, real-time waste monitoring

#### **Key Partners**

Local food banks, sustainability organizations, packaging innovators, tech providers

#### **Produce Types**

Tomatoes, peppers, cucumbers, lettuces

#### **Measurement**

Advanced crop allocation and forecasting technology.

#### **Social/Environmental Impact**

More food for communities, nutrient cycling, landfill diversion, GHG emissions reduced

#### **Financial Outcomes**

Lower waste disposal costs, new revenue from byproduct use, improved supply chain efficiency

#### **Policy Context**

Supportive food donation policies, incentives for sustainable packaging, waste measurement standards

#### **UN SDGs**

2 – Zero Hunger  
12 – Responsible Consumption and Production  
13 – Climate Action  
17 – Partnerships for the Goals

- **Education & Partnerships:** Collaborating across the supply chain to share best practices, promote waste reduction, and support sustainable food systems.

## Beyond the Harvest: Windset Farms' Strategy to Keep Food in the System

Windset Farms employs a comprehensive, integrated approach to minimize food loss and waste across its supply chain, ensuring that fresh, high-quality produce reaches consumers while maximizing resource efficiency.



Windset Farms donates the equivalent to over 3.5 million meals annually across North America

The journey begins with carefully managing surplus edible vegetables, which are redirected thoughtfully to local food banks and community organizations.

This not only prevents good food from going to waste but also strengthens food security in surrounding communities, turning potential loss into meaningful social impact.

At the same time, Windset addresses the fate of non-edible plant materials and byproducts through innovative circular practices.

These materials are repurposed as nutrient-rich animal feed or compost, which reintroduces essential nutrients back into the soil, supporting regenerative agriculture and enhancing long-term soil health. This closed-loop system exemplifies Windset's commitment to environmental stewardship by reducing landfill waste and promoting sustainable resource cycles.

Packaging innovations play a critical role in this strategy. By developing, eco-friendly packaging solutions using recycled content, Windset extends product shelf life and reduces spoilage during distribution and retail. These packaging advancements help preserve freshness, minimize waste at the consumer level, and align with growing environmental standards for sustainable packaging.

Windset's approach centers on advanced crop allocation and forecasting technology. By planting according to projected customer demand, Windset reduces waste from the outset. Detailed crop forecasts across regions and facilities, supported by employee expertise and analytics, allow continuous tracking of yield, quality, and potential surplus from harvest to packing.

This detailed oversight reveals where and why food loss occurs, enabling proactive prevention rather than reactive

**“For Windset, it’s important to manage waste from the very beginning. By planning crops and planting based on confirmed future needs—guided by analysis of past sales trends combined with customer contracts—we’re able to limit waste before crops are even harvested.**

**Using the latest data-driven growing techniques and analytics, we can more accurately pinpoint potential waste and find solutions early. That could mean removing a damaged crop to mitigate future losses, identifying new sales opportunities, reallocating orders, or directing product to food bank donations.**

**Combined, these practices ensure we’re operating efficiently, limiting food waste, and realizing financial benefits in the process”**

management. By identifying spoilage risks, teams can adjust harvesting, packing, and distribution in real time. Forecasting tools ensure production closely matches demand, minimizing surplus before it develops.



Windset Farms grows tomatoes, cucumbers, peppers and lettuces year round

Transparency and rigorous measurement underpin all these efforts. Detailed tracking data and greenhouse gas estimates empower Windset to quantify progress and identify areas for continuous improvement. This data-driven approach fosters accountability and drives innovation internally.

Furthermore, by sharing insights and best practices with partners across the supply chain, Windset contributes to broader industry efforts to build a more responsible, sustainable food system.

From a financial perspective, these circular and data-informed practices yield multiple benefits. Waste disposal costs are reduced as less material is discarded, while new revenue streams emerge from upcycled byproducts.

These efficiencies reinforce Windset Farms' reputation as a leader in sustainable agriculture, showing that environmental responsibility can coincide with strong operational and financial performance.

Ultimately, Windset measures success not only by the quality of its produce but by the lasting environmental and social impact of keeping more food within the system—feeding communities, protecting natural resources, and fostering a healthier future for all.



Windset Farms received the BC Hydro Power Smart Champion Award for its commitment to energy conservation

**Windset uses proprietary software to collect, analyze, and plan across the business. This system is utilized by all departments—including growers, sales, procurement, allocations, and accounting and finance—to ensure information is streamlined and consistent across the company globally. It's vital that data is accurate and accessible to the appropriate teams so informed decisions impacting supply, demand, and overall supply chain efficiency can be made with confidence.**