Turning Greenhouse Waste into Value: Nature Fresh Farms' Circular Approach to Food Loss and Waste

Company Overview

Nature Fresh Farms is one of North America's largest greenhouse growers, proudly rooted in Leamington, Ontario. They cultivate a premium selection of cucumbers, peppers, tomatoes and strawberries, using innovative, sustainable growing methods that emphasize quality, freshness, and environmental responsibility. With operations spanning Canada, the United States, and Mexico, Nature Fresh Farms supplies fresh produce year-round to retail and foodservice customers.

The Challenge

Nature Fresh Farms faces several persistent challenges in their mission to reduce food loss and waste within the greenhouse sector.

Strict retailer requirements around produce size, shape, and cosmetic appearance can result in a small percentage of edible vegetables not meeting retail specifications, despite being high quality. While this represents a limited portion of overall production, it highlights an opportunity to better align supply with evolving consumer expectations.

Perishability further complicates the supply chain. Despite careful harvesting and packing, the natural shelf life of fresh produce means some loss can occur during transportation or at retail. Packaging gaps, both in material and design, can also impact product protection and freshness, increasing waste risk.

Importantly, Nature Fresh Farms takes a proactive approach to ensuring this product is put to good use. Last year, the company diverted more than 84,000 lbs of fresh produce from landfill through partnerships with organizations like Harvest Hands, which repurpose nutritious vegetables for community use.

"At Nature Fresh Farms, we take a purposeful approach to sustainability—being intentional with everything we grow. Through partnerships, innovation, and a circular mindset, we're reducing waste and finding better ways to extend the value of our produce."

– Matt Quiring, SVP Brand, Products and Marketing

🌾 **Where Loss Occurs**
At greenhouse production sites, packing facilities, and during distribution

🎯 **Main Drivers**
Retail quality and size standards, supply-demand imbalances, perishability, packaging challenges

💡 **Solutions**
Off-site bio digestion, food donation partnerships, sustainable packaging trials, waste measurement & classification

🤝 **Key Partners**
Local food banks, food rescue organizations, packaging innovators, sustainability advocates

🥕 **Produce Types**
Strawberries, cucumbers, peppers, tomatoes

📊 **Measurement**
Waste classified by edible vs. inedible, CO2 emissions tracked, standardized protocols, benchmarking initiatives

🌱 **Social/Environmental Impact**
Renewable energy from waste, more food for communities, landfill diversion, reduced plastic contamination

💰 **Financial Outcomes**
Lower waste disposal costs, revenue from renewable energy, reduced packaging waste, operational efficiencies

⚖️ **Policy Context**
Calls for increased R&D funding, practical plastic policies, extended producer responsibility, improved donation logistics

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

That impact is equivalent to removing 37 cars from the road or powering 101 homes for a year: a tangible example of how even a small percentage of product can create meaningful environmental and social value.

The Solution

Nature Fresh Farms addresses food loss and waste through an integrated circular food system approach spanning production, packing, and distribution, focused on reducing waste, repurposing outputs, and reimagining new value streams across the system. Key elements of Nature Fresh Farm's approach include:

- **Off-Site Bio digestion:** Transforming inedible organic waste into renewable energy offsite, reducing landfill waste and supporting sustainability goals.
- **Food Donation Partnerships:** Working with local food banks and food rescue groups to redirect edible surplus
- **Sustainable Packaging Trials:** Testing bio-based packaging components and increasing recycled content in packaging, aiming to reduce plastic use while maintaining product protection.
- **Waste Measurement & Classification:** Implementing monitoring protocols to accurately track edible versus inedible waste and waste diversion efforts.
- **Industry Collaboration & Advocacy:** Advocating for increased R&D investment and inclusive consultation to inform sustainable food system policies.
- **Consumer Education:** Promoting recipes and education programs to help reduce food waste at the consumer level.

Spotlight:

A cornerstone of Nature Fresh Farms' sustainability strategy is their work with a local biodigester, which converts inedible produce—into renewable energy. By breaking down this waste anaerobically, the biodigester produces renewable electricity, thermal energy, renewable natural gas and fertilizer.

This system significantly cuts landfill contributions and greenhouse gas emissions by capturing methane that would otherwise escape into the atmosphere. It also lowers waste disposal costs and supports Nature Fresh's goal of creating a circular, environmentally responsible food system.

The biodigester is more than just a waste management tool—it is a strategic initiative that transforms a challenge (organic waste) into an opportunity (clean energy and fertilizer), reinforcing Nature Fresh Farms' commitment to innovative, practical solutions that drive sustainability from seed to shelf.

Beyond the Greenhouse: Nature Fresh Farms' Approach to Minimizing Food Loss

Nature Fresh Farms tackles food loss and waste with a circular food system mindset that covers everything from growing to packing to distribution.

They prioritize using a waste hierarchy strategy by first reducing food waste at the source, then redirecting edible surplus to local

Through our Harvest Hands partnership, NFF has redirected **40,600+ kg of unsellable peppers and cucumbers** from landfill since August 2025—helping get fresh produce into local communities instead. That's an estimated **116 MT of CO_2e avoided**, equal to the annual electricity use of ~108 homes.

food banks and rescue organizations, before sending inedible food waste to a biodigester.

Nature Fresh Farms also advocates for industry-wide innovation and collaboration to enhance food recovery and reduce waste at scale.

Innovation is key: they're testing bio-based clips, twine, and packaging materials to reduce overall plastic consumption without losing durability or performance.

At the same time, careful measurement and sorting help distinguish edible from inedible waste, taking food safety and handling rules into account to keep tracking accurate.

Packaging remains a big focus, with ongoing trials to reduce plastic without impacting shelf life or food safety.

Education also plays a role. Nature Fresh Farms supports consumers through recipe ideas and waste reduction tips to help cut food waste at home.

Collaborating with partners across the industry, NFF pushes for better sustainability policies, more research funding, and practical solutions that work on the ground.

Measuring Impact and Moving Forward

Accurate measurement of food loss and associated greenhouse gas emissions is foundational to Nature Fresh Farms' continuous improvement efforts. The company is working to standardize CO_2 emissions calculations related to food waste and to quantify associated economic impacts to support smart investments in sustainability. This level of measurement enables better operational decisions, supports ESG reporting, and creates a foundation for benchmarking across the sector.

Nature Fresh Farms' approach demonstrates how food loss can be reframed as a value stream—reducing disposal costs and improving operational efficiency. With the right infrastructure and policy support, these models can shift from cost centres to cost-savings systems.

Committed to sharing their knowledge and collaborating to advance sustainability in Canada's greenhouse sector, Nature Fresh Farms is not just growing produce; they're cultivating a future where food loss is minimized, resources are used wisely, and sustainability is woven into every step of the supply chain. Through ongoing innovation and strong partnerships, they're making meaningful progress toward a more sustainable future for greenhouse farming in Canada.

For more information contact:

Rob Peeters, VP, Strategy & Corporate Affairs: rob.peeters@naturefresh.ca
Packaging: michael.tabakoff@naturefresh.ca
Communications: Meaghan.Obrien@naturefresh.ca