SUSTAINABLE FARMING AND CLIMATE CHANGE ADAPTATION

Guided by the vision to become a Leading Innovation Hub and Solution Provider for the coconut industry, Betrimex places sustainable farming practices and proactive climate change adaptation at the core of our strategy. Betrimex pursues innovation, technology integration, and inclusive stakeholder engagement to realize an ecosystem capable of enduring environmental stress and delivering long-term value.

KEY ACHIEVEMENTS AND DIRECTIONS

Activitiy	2024 results	2025 goals
Coconut embryos produced	10,000 trees	20,000 trees
FIECT seedling provided	3,507 embryos	7,014 embryos
Area protected by natural enemies	32 hectares	50 hectares
Intercropping model	**Phase 2 completed** Feasibility study	**Phase 3** Large-scale implementation

CONTEXT AND CHALLENGES

Ben Tre - the heart of Betrimex's coconut sourcing region - is increasingly vulnerable to the adverse impacts of climate change, including severe saltwater intrusion, extended droughts, and erratic rainfall patterns. According to the Southern Institute of Water Resources Planning (IWRP), in 2024, **salinity levels exceeding 4‰ have intruded more than 40 km inland**, directly affecting coconut cultivation areas. These changes are contributing to reduced yields and lower fruit quality, jeopardizing both the livelihoods of local farmers and the stability of Betrimex's raw material supply chain.

In the face of these challenges, Betrimex recognizes that climate change is not merely a risk but also a catalyst for **transformation to a sustainable and resilient agricultural ecosystem.** Sustainable farming and climate change adaptation are not only central to Betrimex's development strategy but also serve as a vital shield protecting farmers' livelihoods and the local ecosystem.

STRATEGY AND DIRECTION

Betrimex's approach to sustainable farming and climate change adaptation is centered around three strategic pillars:

1. **Research and development of adaptive farming models for coconut cultivation**
2. **Support and capacity building for farmers**
3. **Development of a sustainable supply chain and carbon emission reduction**

This strategy is holistically integrated into all aspects of Betrimex's operations, from R&D and farmer guidance to supply chain structuring and performance monitoring.

BETRIMEX'S ACTIONS

Research and development of adaptive farming models

Betrimex has partnered with the Institute for Circular Economy Development (ICED) and Can Tho University to implement the **Coconut Tree Economic Model Project** - an integrated farming model that combines coconut trees with medicinal herbs and root crops to optimize land use efficiency and enhance soil carbon sequestration. The project is currently being deployed on a **13.4-hectare site in Tan Phuoc District, Tien Giang Province**, with the following key objectives:

1 Optimize land resources

- Utilize acid sulfate soils prevalent in the Mekong Delta, particularly in Tan Phuoc, an area well-suited for coconut development
- Transition from traditional crops (e.g., rice, sugarcane) to coconut to enhance soil productivity and long-term sustainability.

2 Secure a stable raw material supply

- Enhance supply chain resilience by reducing reliance on coconut sourcing from Ben Tre.
- Support production expansion and strengthen competitiveness in the coconut industry.

3 Enhance economic value and improve livelihoods

- Employ integrated farming systems by intercropping coconuts with pineapple and medicinal plants to optimize economic benefits.
- Generate higher economic returns for farmers compared to traditional models.

4 Establish sustainable and climate-resilient raw material areas

- Apply regenerative agriculture practices to increase soil carbon sequestration, improve soil structure, and protect biodiversity.
- Leverage existing dike systems and agricultural infrastructure to ensure long-term environmental adaptability.

Key outcomes

Total of coconut seedlings planted

15,565 plants

Survival rate (well above the 80% target)

93%

Soil health restoration and biodiversity - Agricultural Research and Development Center

Betrimex is proud to be a pioneer in Vietnam's coconut industry, with the establishment of the **Organic Coconut Research & Breeding Center** at Phong Nam Factory. This center aims to rehabilitate coconut farms, enhance the economic value of coconut trees, and promote sustainable agricultural practices that contribute to environmental protection and bolster climate change adaptation efforts.

Project objectives:

1. Coconut farms to be rehabilitated: **1,200 hectares**

2. **Environmental impact**
   - Implement **a circular agriculture model** to reduce agricultural waste in the **coconut value chain in alignment with Betrimex's Zero Waste approac**h and reuse coconut by-products in production processes.
   - **Sustain and expand organic coconut plantation areas** to minimize the use of chemicals and reduce negative impacts on land and water resources.
   - **Enhance coconut trees' climate resilience** to help farmers ensure long-term productivity.

3. **Socio-economic impact**
   - Increase the economic value of the coconut supply chain by **optimizing the use** of coconut by-products.
   - Establish **a sustainable business-farmer linkage model** to foster long-term partnerships and ensure stable livelihoods for local communities.
   - Provide technical support and input investment, including **high-quality seedlings, organic farming guidance, fertilizers, and offtake agreements to guarantee output.**

Key outcomes

Coconut embryos produced

3,507 embryos

Forecasted increase in embryo production

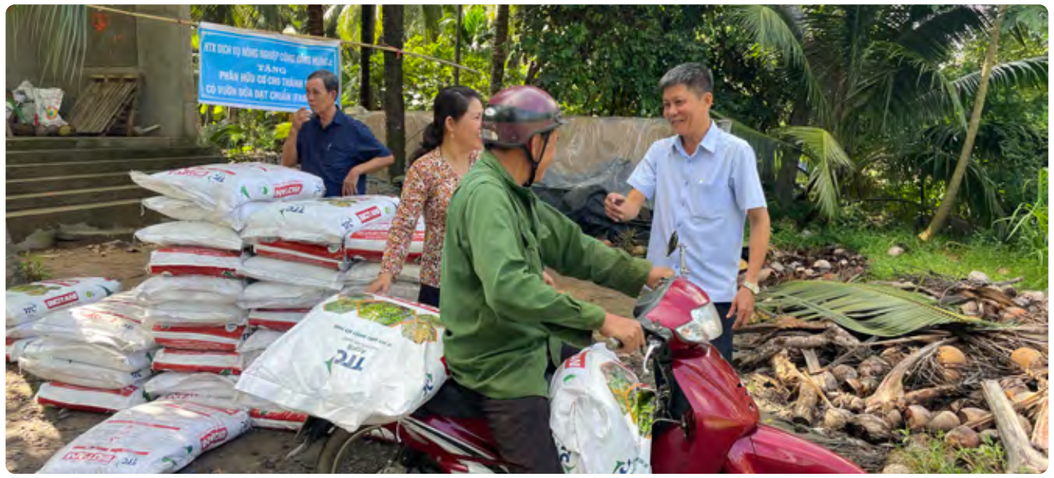
7,014 embryos

In 2024, Betrimex completed two successful phases of the project with promising initial results. Phase 3, slated for 2025, will focus on scaling the model and attracting further investment while assessing both the economic and environmental impacts of the initiative.

SUSTAINABLE FARMING AND CLIMATE CHANGE ADAPTATION

Support and capacity building for farmers

Betrimex has implemented a range of programs to support farmers in their transition to a sustainable farming model.



Fairtrade - Promoting sustainable livelihoods for farmers

With the aspiration to improve the livelihoods and income of coconut farmers and increase the visibility of Ben Tre coconut products in international markets, Betrimex took a **pioneering step in 2019 by implementing the Fairtrade program and has continued to uphold it ever since.**

This program ensures that farmers within Betrimex's supply chain receive a fair share of the product value, along with technical and financial support to adopt sustainable farming practices. Hung Le Cooperative, a strategic partner of Betrimex, has been Fairtrade certified since 2020. This marks a significant milestone in **the development of a responsible and transparent coconut production ecosystem.** As of 2024, the cooperative has cumulatively received **over VND 4 billion from the Fairtrade fund,** which has been used to benefit the local coconut farming community.

Practical activities funded by the Fairtrade program

Sustainable production

Donate **85 tons of organic fertilizer** to farmers, which supports the shift to organic coconut cultivation, reduces environmental impact, and improves soil health.

Social security support

Provide direct financial support to 73 farmers facing severe hardships due to serious illnesses, demonstrating Betrimex's deep sense of solidarity and steadfast commitment to social responsibility.

Trichogramma - Employing natural enemies for pest control

As green and clean agriculture becomes an irreversible global trend, Betrimex is at **the forefront of applying biological solutions** to control pests sustainably and minimize negative impacts on the environment. One of the company's key initiatives is **the breeding and release of Trichogramma warps - the natural enemy of coconut stem borers** - to replace chemical pesticides and protect the agricultural ecosystem.

Trichogramma warps are tiny parasites that target stem borers by disrupting their life cycle. Their use significantly reduces pesticide residues, thereby ensuring food safety and protecting biodiversity. This method is **not only effective and safe but also sustainable, contributing to a chemical-free, circular agricultural model.**

Key outcomes

- Since 2021, Betrimex has actively partnered with regulatory agencies to implement Trichogramma breeding and release programs in areas severely impacted by black-headed caterpillars.
- **Program scale:** The initiative has been deployed across **nearly 1,000 hectares of coconut plantations** in Ben Tre and Tra Vinh provinces.
- **Impact:** A total of nearly 103 million Trichogramma warps have been released into the environment. This contributes to natural pest control, crop yield protection, and soil health preservation.

Sustainable supply chain development, Farmer relationship management

In 2024, Betrimex launched the **Farmer Relationship Management System (FRM**) - a breakthrough initiative designed to strengthen sustainable cooperation and enhance efficiency across the agricultural value chain.

More than a management platform, FRM serves as a digital ecosystem that seamlessly connects Betrimex, farmers, suppliers, and partners to foster a transparent, well-structured, and mutually beneficial network of cooperation.

Connectivity and comprehensive support

- Provide up-to-date information on farming techniques, coconut care processes, and sustainable agricultural practices.
- Strengthen transparency in procurement policies, financial support programs and cooperation initiatives to ensure long-term value for farmers.
- Establish two-way communication channels that allow Betrimex to receive farmer feedback and adjust strategies accordingly.

Stable sourcing and sustainable development

- The FRM system enables Betrimex to optimize supply chain operations, enhance raw material quality, and ensure product compliance with international standards. Farmers also benefit from comprehensive support and increased income. Together, Betrimex and the farming community are building a sustainable, efficient, and responsible agricultural system.

LONG-TERM IMPACT

Betrimex's climate adaptation efforts not only strengthen the resilience of our supply chain **against climate change impacts** but also play a pivotal role in **reducing carbon emissions** and **preserving biodiversity**. By integrating science, technology, and community engagement, Betrimex is shaping **a sustainable agricultural ecosystem** where farmers can secure stable livelihoods while contributing to environmental protection.

In the long run, Betrimex envisions that our sustainable and climate-adaptive cultivation model will set a new benchmark for the green agriculture sector, while serving as a key driver towards achieving our goals of carbon neutrality by 2035, Zero Waste by 2040, and long-term sustainable development that benefits both local communities and the environment.