

Innovations And Impact



DAWADAWA IMPACT
INITIATIVE

ABOUT US

Owned and led by smallholder farmers, the Dawadawa Impact Initiative (DII) is a social enterprise that empowers farmers to build resilience to climate change. We are a team of inspired and dedicated social entrepreneurs who have taken on the mission to revolutionize agriculture in Africa by rewriting the rules of agriculture through deploying innovation in agricultural products in the farm-to-table food system.

The Initiative provides all the agribusiness solutions under one roof so that beneficiary farmers do not have to deal with fragmented services from different suppliers with varying quality.

Our approach addresses the long-standing challenges faced by smallholder farmers, including post-harvest losses, lack of quality inputs, limited access to market, agronomic information, and value-addition.

Since 2017, we have developed and implemented a number of sustainable off-grid technologies which uniquely combine with community-focused business models to achieve lasting impact. Find below three of our unique products and its climate and economic impacts



ECO-SOLAR COLD STORAGE

Dawadawa Impact Initiative makes it possible for smallholder farmers to leverage on its Eco-Solar cold storage technology on storing as a service model that eliminates access barriers. The technology unlocks longer shelf life and higher quality produce thus promoting food security through off-grid cold storage solutions as well as improving their post-harvest handling habits leading to increased incomes.

Smallholder farmers and other food aggregators are charged a flexible low fee subscription for each crate of food they store in the cold storage facility helping them to maintain the quality of their produce and extend the shelf life of perishable food from 2 to 21 days. The cold storage can be kept on temperature for three days during power outages without starting the backup generator (if no warm goods are loaded during this time).

ECO-SOLAR COLD STORAGE'S IMPACT



FOOD LOSS REDUCTION:

By using solar-powered cool rooms instead of fossil fuels, the technology has reduced post-harvest food waste by 50%, saving over 33,546 metric tons of food from spoiling.



INCREASED INCOMES:

By maintaining the quality of produce and reducing food loss, the technology helps smallholder farmers and food aggregators improve their post-harvest handling habits, leading to increased incomes.



GREENHOUSE GAS EMISSIONS REDUCTION:

The solar freezer technologies have helped avoid emitting over 272,000 pounds of carbon dioxide, contributing to the mitigation of climate change.



ADAPTATION TO CLIMATE CHANGE:

The technology employs appropriate cooling technologies, allowing farmers to adapt to the effects of climate change on food storage.



EXTENDED SHELF LIFE:

Smallholder farmers can store their produce in the cold storage, increasing the shelf life of perishable food from 2 to 21 days. This enables farmers to make more profits from sales and resist panic selling at lower prices.



OFF-GRID ACCESS:

The off-grid solar energy combined with thermal storage eliminates the need for diesel generators, making the cold storage suitable for remote areas with limited access to the grid. This helps reduce food spoilage in those areas.

ECO-SOLAR COLD STORAGE'S IMPACT



SUSTAINABLE REFRIGERANT:

The system uses propane (R472A), a natural refrigerant with a low Global Warming Potential (GWP) and no Ozone Depleting Potential. This choice promotes sustainability and future-proof technology.



CLEAN ENERGY GENERATION:

The initiative has generated over 500,000 units of clean energy (kWh) through its solar-powered cold storage, reducing reliance on fossil fuels.



GHG EMISSION REDUCTION:

By reducing post-harvest food loss, the technology significantly decreases the release of greenhouse gas emissions into the atmosphere.



EMPOWERING WOMEN FARMERS:

By teaching smallholder women farmers proven technologies and practices, the Initiative helps increase yields, improve nutrition, and strengthen food security. This empowers women farmers economically and socially, contributing to gender equality and inclusive agricultural development.



RENEWABLE ENERGY PENETRATION:

The primary source of energy for the solar freezer is renewable solar PV, reducing the dependence on fossil fuel-based energy sources and increasing technology access in off-grid areas.



PROMOTING SUSTAINABLE AGRICULTURE: The Eco-Solar reduces the reliance on environmentally harmful practices such as the use of diesel generators and chemical battery technologies. By promoting sustainable agriculture, the technology supports long-term ecological balance and resource conservation.



These impacts align with the United Nations SDGs, addressing poverty, hunger, gender equality, clean energy, decent work, responsible consumption, climate action, and promoting sustainable agriculture.



GOAL 1: NO POVERTY

Increased Incomes: Maintaining produce quality and reducing food loss help farmers and food aggregators improve post-harvest practices, leading to higher incomes.



GOAL 2: ZERO HUNGER

Food Loss Reduction: Solar-powered cool rooms reduce post-harvest food waste by 50%, saving 33,546 metric tons of food from spoiling.

Extended Shelf Life: Smallholder farmers can store produce for up to 21 days, increasing profits and reducing panic selling at lower prices.

Promoting Sustainable Agriculture: The Eco-Solar cold storage technology encourages sustainable agricultural practices, ensuring consistent food production while preserving natural resources.



GOAL 5: GENDER EQUALITY

Empowering Women Farmers: By teaching smallholder women farmers proven technologies and practices, the Initiative helps increase yields, improve nutrition, and strengthen food security, empowering women economically and socially.

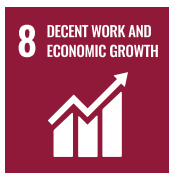


GOAL 7: AFFORDABLE AND CLEAN ENERGY

Clean Energy Generation: The technology generates over 500,000 units of clean energy, reducing reliance on fossil fuels.

Off-Grid Access: Off-grid solar energy combined with thermal storage eliminates the need for diesel generators, making cold storage available in remote areas and reducing food spoilage.

Renewable Energy Penetration: The primary use of solar PV reduces dependence on fossil fuel-based energy, expanding technology access in off-grid areas and further reducing GHG emissions.



GOAL 8: DECENT WORK AND ECONOMIC GROWTH

Rural Development: The availability of Eco-Solar cold storage in remote areas creates opportunities for rural development, leading to economic growth and livelihood enhancement in rural communities.



GOAL 13: CLIMATE ACTION

Greenhouse Gas Emissions Reduction: The use of solar freezers avoids emitting over 272,000 pounds of carbon dioxide, contributing to mitigating climate change.

Adaptation to Climate Change: Appropriate cooling technologies assist farmers in adapting to climate change's effects on food storage.

Sustainable Refrigerant: The use of propane as a refrigerant (R472A) promotes sustainability with a low Global Warming Potential (GWP) and no Ozone Depleting Potential.

GHG Emission Reduction: By reducing post-harvest food loss, the technology significantly decreases greenhouse gas emissions.



GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

Food Loss Reduction: Solar-powered cool rooms reduce post-harvest food waste by 50%, saving 33,546 metric tons of food from spoiling.

Resource Conservation: The use of Eco-Solar cold storage optimizes resource utilization, preserving valuable resources such as water, land, energy, and labor invested in food production, supporting sustainable agricultural systems.





ENO-KOBI ORGANIC FERTILIZER

The Eno Kobi Organic Fertilizer is the flagship product of Dawadawa Impact Initiative.

It addresses the challenge of feeding the planet sustainably to address the broken food system, post harvest losses and farmers' ability to fight against droughts and low yields and being able to grow crops as consistently as possible regardless of the weather patterns and what happens to the climate.

It build solutions that improve the capacity of farming systems to mitigate and adapt to climate change in more systemic and sustainable ways and ensures farmers are able to produce enough food whilst reducing shortage of food supply. and that means that yields have to be consistent and farmers need to have access to soil support to enrich the landscapes.

ENO-KOBI ORGANIC FERTILIZER IMPACT



SOIL IMPROVEMENT:

The organic fertilizer improves the soil by enhancing its ability to retain carbon and resist drought, promoting regenerative soil strategies.



GREENHOUSE GAS EMISSION REDUCTION: Farmers can immediately reduce greenhouse gas emissions by up to 27% per acre by using the slow-release nutrient technology of the organic fertilizer, increasing yield and profitability.



NUTRIENT LOSS REDUCTION:

The organic fertilizer helps maximize agricultural production while reducing nutrient loss into the environment, supporting sustainability and long-term soil health.



METHANE EMISSION REDUCTION:

By up-cycling food waste into bio-based plant nutrients and returning organic matter to the soil, the fertilizer reduces methane emissions, contributing to environmental protection.



CIRCULAR APPROACH:

The fertilizer adopts a circular approach, accelerating the regeneration of degraded soils, boosting agricultural productivity, and helping farmers mitigate and adapt to climate change by storing carbon in the ground.



IMPROVED YIELD AND ROI

The fertilizer enhances plant growth and nutrient efficiency, resulting in bigger and better crops. Farmers experience increased yields and up to a four-times return on investment.



These impacts align with the United Nations SDGs, addressing hunger, responsible consumption and production, climate action, and sustainable land use.

2 ZERO HUNGER



GOAL 2: ZERO HUNGER

Increased Crop Production: The use of the Eno Kobi Organic Fertilizer has led to a 60% increase in crop production in various regions, contributing to global food security and addressing hunger and poverty.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

Nutrient Loss Reduction: The organic fertilizer helps maximize agricultural production while reducing nutrient loss into the environment, supporting sustainability and long-term soil health.

Circular Approach: The fertilizer adopts a circular approach, accelerating the regeneration of degraded soils, boosting agricultural productivity, and helping farmers mitigate and adapt to climate change by storing carbon in the ground.

13 CLIMATE ACTION



GOAL 13: CLIMATE ACTION

Soil Improvement: The organic fertilizer improves the soil by enhancing its ability to retain carbon and resist drought, promoting regenerative soil strategies.

Methane Emission Reduction: By up-cycling food waste into bio-based plant nutrients and returning organic matter to the soil, the fertilizer reduces methane emissions, contributing to environmental protection.

Greenhouse Gas Emission Reduction: Farmers can immediately reduce greenhouse gas emissions by up to 27% per acre by using the slow-release nutrient technology of the organic fertilizer, increasing yield and profitability.

15 LIFE ON LAND

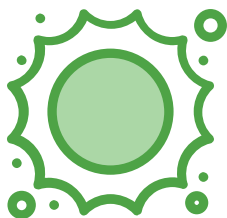


GOAL 15: LIFE ON LAND

Soil Improvement: The organic fertilizer improves the soil by enhancing its ability to retain carbon and resist drought, promoting regenerative soil strategies.

Nutrient Loss Reduction: The organic fertilizer helps maximize agricultural production while reducing nutrient loss into the environment, supporting sustainability and long-term soil health.

Circular Approach: The fertilizer adopts a circular approach, accelerating the regeneration of degraded soils, boosting agricultural productivity, and helping farmers mitigate and adapt to climate change by storing carbon in the ground.



OBAATAN PA SOLAR DRYERS

Our solar-powered food dryers are a prime example of how we can strengthen the resilience of our smallholder farmers in the face of climate change. Not only do they provide an environmentally friendly energy source, but also promote greater food security and provide more autonomy to these local farmers. The technology works by harnessing the energy of the sun's UV rays to make food dry faster without using artificial heat sources like ovens.

During the rainy season, sun-drying alone is not enough to reduce grain moisture levels sufficiently for safe storage; this often results in an increased threat of aflatoxin and mold build-up. By giving drying services, smallholder farmers can quickly and conveniently dry their grains down to an appropriate moisture level that will allow long-term storage.

The innovation has potential for success in addressing three global ills: climate change, world hunger, and waste management.

OBAATAN PA SOLAR DRYERS



ADAPTATION TO CLIMATE CHANGE:

The dryers help smallholder farmers adapt to climate impacts and increase their resilience by providing a more reliable source of food throughout the year even under unpredictable weather conditions.



SUSTAINABLE RESOURCE UTILIZATION: Farmers can utilize their limited resources in a sustainable way by naturally drying their crops using solar heat instead of relying on artificial heating systems or expensive energy sources like fuel or electricity. This approach saves them money and allows for the production of healthy crops without the use of chemical fertilizers and pesticides that can be detrimental to health.



ECO-FRIENDLY ENERGY SOURCE: The solar dryers operate entirely on solar energy, making them environmentally friendly. They have zero energy costs and produce zero carbon emissions, contributing to a cleaner and non-polluting energy source.



CLEAN AND SUSTAINABLE FOOD PRESERVATION: Solar drying provides a clean and sustainable solution to the global need for food preservation. The process is not dependent on weather conditions, making it reliable and independent of external factors. It is environmentally friendly, energy-efficient, and reduces the carbon footprint associated with food preservation methods.



MITIGATING POST-HARVEST LOSS:

By addressing post-harvest loss, the solar dryers enhance the resilience of farming communities against the impacts of climate change. The dryers enable farmers to effectively dry their crops, reducing the risk of spoilage and mold build-up during storage.



By aligning with these SDGs, our solar dryers play a crucial role in addressing global challenges, such as hunger, climate change, clean energy access, and sustainable production and consumption practices.

2 ZERO HUNGER



GOAL 2: ZERO HUNGER

Solar dryers contribute to food security and reduce post-harvest loss, ensuring that smallholder farmers have access to a reliable source of food throughout the year.

7 AFFORDABLE AND CLEAN ENERGY



GOAL 7: AFFORDABLE AND CLEAN ENERGY

Solar dryers operate entirely on solar energy, providing an affordable and clean energy source for food drying and preservation.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



INDUSTRY, INNOVATION, AND INFRASTRUCTURE

Solar dryers represent an innovative technology that strengthens the resilience of smallholder farmers, providing them with infrastructure to improve food processing and storage.

12 RESPONSIBLE CONSUMPTION AND PRODUCTION



GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

Solar dryers promote responsible production and consumption by reducing food waste and improving the efficiency of food preservation methods.

13 CLIMATE ACTION



GOAL 13: CLIMATE ACTION

Solar dryers help smallholder farmers adapt to climate change and enhance their resilience by providing a reliable and climate-independent method for drying and preserving agricultural products.

15 LIFE ON LAND



GOAL 15: LIFE ON LAND

Solar dryers contribute to the conservation of land resources by reducing the need for artificial heating systems and using sustainable solar energy for crop drying.

17 PARTNERSHIPS FOR THE GOALS



PARTNERSHIPS FOR THE GOALS

The adoption and promotion of solar dryers involve partnerships between organizations, governments, and local communities to achieve sustainable development goals related to climate change mitigation, food security, and innovation.



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