



# CORPORATE SUSTAINABILITY ALIGNMENT

■ FIRST EDITION









# Author's Preface

For more than 25 years, GrainPro has been helping solve one of the most enduring problems in human history. This is the problem of hunger.

GrainPro's work is significant in preserving the quality of various dried agricultural commodities. That delicious latte you are enjoying now as you read this is made from green coffee beans that were likely shipped inside our unique storage technology.

By developing sustainable and climate-smart solutions to post-harvest food losses, GrainPro has made a significant impact on the lives of both food producers and consumers around the world. However, hunger is a conundrum.

Despite our increased access to information and social interactivity, hunger continues to be widespread. It baffles the mind to think that while food is essential to the survival of our species, more than 900 million are deprived of this basic need. They are mostly the same people who are directly feeling the effects of climate change.

With climate change, we are losing food before it reaches the market, creating a debilitating cycle of hunger, malnutrition, poverty, and more food losses.

As we enter the next decade, reducing hunger is critical. This is a challenge of utmost importance and solving it is undoubtedly the noblest of all human endeavors.

This document defines and aligns GrainPro's sustainability goals; including its position and agenda, and how GrainPro is helping solve the greater social and environmental issues of our time. As you read through this, you will gain a better understanding of how GrainPro can impact the lives of food producers and consumers through its line of sustainable solutions.

Finally, we cannot solve post-harvest losses alone. GrainPro thrives through collaboration and partnership to educate as many food producers -- big and small -- about post-harvest losses and its impact on the global food supply. Thus, we encourage you to join us in our meaningful journey. Let's solve this problem together.

**Victor Dela Casa**  
*Sustainable Development Officer*







## Table of Contents

Storing the Future	4
Aligned to Sustainability	5
Taking Action	7
A Food Secure Future	7
Ending Extreme Poverty	8
Spotlight: Babban Gona	9
Climate Change Mitigation Strategy	10
Ending the Reliance on Harmful Chemicals	11
Spotlight: AgroCrops	12
Sustainable Agriculture	13
Towards More Sustainable Manufacturing	14
Looking Forward to a Sustainable Future	15
President's Message	16



## 1. Storing the Future

Sustainable food production is at the core of our business.

Today, about a third of the food the world produces is lost at some point during the post-harvest value chain with cereal grains often experiencing the largest losses. The impact of these losses is immense and catastrophic to food and nutrition security, quality of life, human well being, extreme poverty, the average age of mortality, and the environment we live in.

To achieve a more food secure future, we need to end the cycle of hunger and extreme poverty that is prevalent especially in developing parts of the world. However, many people continue to see the challenges of food insecurity as something to be solved exclusively through modern agricultural intensification. There is another more sustainable way!

We see an alternative approach to the problem of food insecurity and poverty. We believe sustainable food production is about the efficient and responsible use of natural resources, and reduction of post-harvest losses.

**Better food and  
more of it through  
hermetic storage.**





## 2. Aligned to Sustainability

As a technology leader in hermetic storage and modified atmospheres, GrainPro is at the forefront in the development and propagation of sustainable and climate-smart solutions that address six important targets of the United Nations' Sustainable Development Goals on hunger, extreme poverty, well-being and responsible food value chains.



### SDG 1.5

By 2030, dramatically reduce extreme poverty, people living on less than \$2.00 per day, and build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters.



### SDG 2.1

By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.

### SDG 2.3

By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

### SDG 2.4

By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.



### SDG 3.9

By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution, and contamination.

### SDG 12.3

By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along rural production and supply chains, including post-harvest losses.

### SDG 12.5

By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.



### SDG 12.6

Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.



To address these SDGs, we are working to achieve the following:

- **REDUCE POST-HARVEST FOOD LOSSES, IMPROVE NUTRITION, AND INCREASE THE SUPPLY OF DRIED AGRICULTURAL COMMODITIES AND STAPLE CROPS**
- **PROTECT CONSUMERS AGAINST INFESTATION AND AFLATOXIN-PRODUCING MOLDS**
- **ELIMINATE THE NEED FOR SYNTHETIC AND HARMFUL CHEMICALS FUMIGANTS**
- **ENHANCE THE INCOMES AND QUALITY OF LIFE OF SMALLHOLDER FARMERS BY INCENTIVIZING PRESERVATION AND COUNTERING SUPPLY AND PRICE VOLATILITY**
- **HELP CREATE JOBS IN THE AGRICULTURE SECTOR BY MAKING FOOD PRODUCTION PROFITABLE**
- **PROMOTE THE REDUCTION OF POST-HARVEST LOSSES AS A GREENHOUSE GAS MITIGATION STRATEGY**
- **IMPLEMENT SUSTAINABLE AND EFFICIENT MANUFACTURING PROCESSES**
- **IMPROVE PRODUCT RECYCLABILITY AND STEWARDSHIP PRACTICES**



## Food and Agriculture Organization of the United Nations



The United Nations' Food and Agriculture Organization's latest food security report found that since 2015 the number of people who are exposed to severe levels of food insecurity and hunger is growing. According to the latest global estimates, more than 900 million are suffering from some form of food insecurity.

This calls for more aggressive actions and stronger collaborations. By partnering with governments, academics, non-profit groups, and private institutions -- including small farmers and large-scale food producers -- we are strengthening the importance of post-harvest management in the food production value chain.

Our mission is to make post-harvest management a priority agenda and a key component in sustainably addressing hunger and food insecurity. This includes diversifying our solutions to post-harvest losses; keep these solutions affordable, accessible and environmentally safe; and promote these solutions as either an alternative to or as part of any food production intensification strategy.



### 3. Taking Action

## A Food Secure Future



**In the next 10 years and beyond, humanity's biggest challenge is to sustainably feed our ever growing population.**



The UN is already seeing a steady increase in the number of people who are suffering from some form of food and nutrition insecurity. This prompts governments and donor organizations to increase investments into food production intensification. But what if the solution lies elsewhere?

Each year, a third of all food produced are either lost or wasted. In richer countries where food is abundant, food waste is barely a concern. However, food losses can mean life or death for people in the poorest parts of the world.

The use of rudimentary post-harvest practices is a significant reason for production inefficiencies that lead to low-quality outputs and food losses. Therefore, farmers in developing parts of the world need post-harvest solutions that are designed to address climate-change's impact on food production.

Reducing post-harvest losses through climate-smart solutions could be a more cost-effective way to address hunger.

In sub-Saharan Africa for example, eliminating grain losses

could provide the annual calorie requirement of around 48 million people without spending additional resources (water, land and fuel) to grow the same amount of food.

GrainPro is an invaluable collaborator in solving food and nutrition insecurity. We are committed to reducing post-harvest food losses by building more sustainable food systems. Through our line of climate-smart solutions, we are storing the future by ensuring that everyone is sufficiently fed clean and nutritious food -- not just today, but for coming generations as well.



# Ending Extreme Poverty



**GrainPro sees the importance of smallholder farmers in global food production.**



An estimated 200,000 smallholder farmers benefit directly from using GrainPro's solutions every year. Reaching out to them allows us to understand their needs, and provide them with the tools to reduce their post-harvest losses and raise their quality of life.

Smallholder farming is a major source of food and rural income. There are at least around 500 million smallholder farmers around the world with women making up about half. They produce around 80 per cent of all food consumed in Asia and Sub-Saharan Africa.

Most notable is the expected rise of their significance in the coming years. Complexities associated with industrial-scale farming is shifting the focus back towards smallholder farmers who are expected to lift themselves out of poverty while increasingly meet the demands of an estimated 9 billion people.

Smallholder farmers can't do it with just traditional farming methods and simple implements. They need climate-smart innovations to sustainably increase their production. Therefore, GrainPro's role is crucial to their success.

We collaborate with governments, academics and development organizations to empower and help them sustainably maximize food production. By enabling the right conditions and making our solutions more accessible, small farmers will be able to reduce their food losses and supply high-quality products while improving their and their families' well-being. Ultimately, giving them a fighting chance against hunger and extreme poverty.





## Spotlight: **BABBAN GONA**



**The Babban Gona program in Nigeria is a great example of how sustainable post-harvest systems can have a positive impact on food security and poverty alleviation.**

The innovative program boasts a unique business model that provides its farmers with the training, machinery and the financial support they need to increase their maize yields and ensure their profitability. More than 20,000 families in North Central and Northwest Nigeria are directly benefiting from the program.

After harvesting, the sponsored farmers bring their bags of maize to Babban Gona collection centers. The bags of maize are kept inside GrainPro hermetic Cocoons for a couple of months to protect them from infestation and fungal growth.

The Cocoons are designed to stop insect activity and inhibit the growth of aflatoxin-producing molds without using chemical fumigants. The Cocoon's low permeability to air and moisture provides a safe environment for the grains that is ideal for long-term preservation. It doesn't rely on fossil fuels to run, thus, reducing operating expenses.

The farmers can then take advantage of seasonal supply and demand opportunities. During the lean season, these farmers can raise their bottom lines by selling their products to premium buyers that pay for quality.

Babban Gona is also addressing unemployment. Despite a very well-educated population, unemployment remains high in the region. With food production becoming profitable, a growing number of young Nigerians are coming on board.

By making a viable business model around agriculture and food production, the Babban Gona program is tackling multiple sustainability concerns to help enrich the lives of its members and smallholder farmers.



# Climate Change Mitigation Strategy

2 ZERO  
HUNGER



What most people don't realize is that food loss is central to climate change and is one of the major reasons for deforestation, pollution and the loss of local biodiversity.

Food lost and wasted account for as much as a tenth of all our greenhouse gas

emissions. Unfortunately, we continue to lose about a third of all the food we produce due to improper handling and storage.

The failure of food producers to minimize their post-harvest losses, among others, is adding to the conversion of tropical rainforests into agricultural lands. In many developing parts of the world, forests are being cleared at an alarming rate. On average, 7 million hectares of tropical forests disappear every year.

However, tropical forests serve as natural regulators against greenhouse gases and extreme climate conditions. If we allow forests to disappear, we face a dire future where food production becomes more challenging. This will thrust us into

a vicious cycle of forest conversions, rising carbon dioxide levels, extreme climate conditions, and compounded food insecurity.

**We believe in deforestation-free agriculture. Using available resources more efficiently and safely storing the food that we produce are sustainable approaches to food production. By reducing our food losses, we not only address food insecurity, we also discourage deforestation as an agricultural intensification strategy.**

GrainPro is actively collaborating with institutional partners to promote post-harvest management as an integral part of a greater agroforestry system and educate food producers on how cutting food losses can responsibly increase yields without causing damage to forest ecosystems.





# Ending the Reliance on Harmful Chemicals

For years, the agriculture sector relied heavily on chemical fumigants to control both infestation and fungal growth. However, most of these chemicals are found to cause health and environmental concerns. Their use often introduces poisons into our food supply.

One such chemical is Methyl Bromide (MeBr), which is used in more than 100 crops. As a flexible pest control chemical solution, it is applied as a soil fumigant to control soil-borne diseases, nematodes, weeds, pathogens and insects. It is also used to protect crops during the post-harvest stage — from storage, transport and quarantining.

Despite its widespread use, it was found that MeBr is depleting the ozone layer and causes serious health risks including cancer. In addition, MeBr are known to enter animals and humans who ate food it touched. Studies also found that MeBr applied in the soil spills over into waterways through rain and precipitation.

Aluminum phosphide or phosphine is another chemical used in controlling infestation on food. Among its downsides is its toxicity. Phosphine is a highly poisonous gas that can cause nausea, pulmonary edema, and immediate death among overexposed adults and children. Because it is denser than air, it tends to stay longer on the floor, exposing more people.



Using organic and safe storage strategies to store and transport dried agricultural commodities is a logical alternative and will absolutely play a huge role in curbing our reliance on harmful chemical fumigants. Creating safer food for human well being.



**GrainPro advocates the use of Ultra Hermetic and atmospheric modification technologies as a safer and organic way to store food. It is proven that fumigating food with controlled amounts of inert gases such as carbon dioxide is safer and cleaner.**







We also champion the importance of properly drying commodities to ensure that they are at their correct moisture content for long-term storage, which helps control fungal contamination. Controlled moisture and atmospheric environments keeps our food safer.

Our work with organic farmers and producers of high-value commodities is core to our producing healthier food. In India alone, for example, organic producers make up 90% of our business. In the next 5 years, we expect to grow even more in the organic sector.

As we continue to increase our portfolio of sustainable and certified-for-organic-use post-harvest solutions, we are helping promote organic agriculture and reduce agricultural reliance on harmful chemicals; thus, creating a food production system that supplies only clean and nutritious food. We're helping to create the future of food.

## Spotlight: **AgroCrops**



AgroCrops only have positive things to say about their use of hermetic solutions. Since 2015, hermetic technology is playing key roles in their post-harvest management and phytosanitary compliance.

With a 5% share of the global peanut market, AgroCrops' is one of the biggest exporters in the world. This success is a tribute to uncompromising commitment to quality.

Part of this commitment is their use of hermetic storage. AgroCrops has been using GrainPro's patented hermetic Cocoons for long-term storage and carbon dioxide fumigation, and the TranSafeliner to minimize the impact of condensation during transoceanic transport.

These solutions enable AgroCrops to stop infestation and inhibit the proliferation of aflatoxin-producing *Aspergillus flavus* without applying any harmful chemical fumigants.



The benefits are especially evident during port inspections. As a highly exported commodity, peanut is carefully inspected for aflatoxins and traces of hazardous chemicals. By using Cocoons and TranSafeliners, AgroCrops is confident that their shipment is free of any contaminants upon arrival. This saves them from financial losses as a result of rejection.

Hermetic storage provides AgroCrops a cost-effective way to fumigate their products and guarantee their compliance to strict phytosanitary regulations. Most importantly, it helps reaffirm their position in the peanut sector as a market leader and an archetype of a healthy, sustainable and profitable business model.



# Sustainable Agriculture



In order to meet the long-term storage requirements needed by food producers, our products are designed to keep food safe from air and moisture; and withstand extreme environmental conditions. In addition, in order to meet the needs of rural subsistence farmers, it must also be at a low price point that food producers of all scales can afford.

Our use of innovative multi-layered plastics makes our hermetically sealed reusable bags and shipping container liners both affordable and extremely effective against insects and molds.

While the materials we use are recyclable, machines that recycle multilayer plastics are extremely specialized and rarely accessible. This is obviously something we continue to work on by exploring new ways to improve the recovery and recyclability of our products. We continually innovate our products and systems towards a more sustainable agriculture.

We are also closely monitoring advancements and new environment-friendly alternatives to plastic. As new technologies catch up to sustainable food preservation requirements, we are determined to adapt and improve our solutions accordingly.

- **NEW POLYMER ADDITIVES TO MAKE OUR CURRENT FILM COMPOSITION EASILY RECYCLABLE AT CONVENTIONAL FILM RECYCLING FACILITIES**
- **MULTILAYERED FILM COMPOSED OF COMPATIBLE MATERIALS**
- **BARRIERED BIODEGRADABLE FILMS**
- **NON-PLASTIC MATERIALS**
- **UPCYCLING OUR RECYCLED FILMS**
- **COLLABORATION WITH RECOVERY AND RECYCLING ADVOCATES SUCH AS TERRACYCLE**
- **SUPPORTING END USERS TO DEVELOP REUSE PROGRAMS**





# Towards More Sustainable Manufacturing

## 12 RESPONSIBLE CONSUMPTION AND PRODUCTION



**GrainPro's profitability and future growth is aligned to circularity, product stewardship and sustainability.**

We made it a point to streamline our manufacturing processes. We are a certified ISO 9002 company that is always striving to improve how we do things to ensure the quality of our products.

As part of our strategy to reduce our global carbon emissions, we streamlined our manufacturing process to improve efficiency and maximize productivity. We limit the use of automated machines and rely mostly on our production teams to manually put together most of our products. PET bottles, single-use bags, and plastic straws are also gone from our facilities.

Finally, we are exploring ways to cut down our reliance on fossil fuels by harnessing abundant sources of renewable energy. By 2025, we want to increase our use of renewable energy to 75 percent at our manufacturing facilities with solar energy and biogas.

Using renewable energy will not only trim our operational expenses, it will also cut down our net carbon footprint. This puts us in an excellent position to sustainably grow as a company.

Success is the sum of small efforts. As an industry leader and game changer, we will continue to seek out and implement sustainable ways of doing business to become a model of responsible manufacturing practices.





## 4. Looking Forward to a Sustainable Future



We understand that more needs to be done to achieve a food secure future. We do not have all the answers but we strongly believe that eliminating post-harvest losses is an important part of the solution aligned with the UN Sustainable Development Goals.

Our commitment is that we will continue to be a driving force in post-harvest technology. This means leveraging our experience and broadening our collaboration to develop meaningful and environmentally sound solutions to food insecurity, helping to lead to a world with no extreme poverty where everyone can meet their minimum nutritional needs.





## 5. President's Message

GrainPro's mission is to inspire change in the way food is handled by developing solutions that drive sustainability and impact the quality of life. Food is our most precious resource and protecting an abundant supply continues to motivate us.

Embracing the United Nations' Sustainable Development Goals (SDGs) is a critical step toward ensuring prosperity, health and well-being for future generations.

GrainPro believes that increasing our food production can be achieved through sustainable and efficient use of land and water resources. By incorporating these SDGs into GrainPro's core values, we are accelerating our drive to develop and promote climate-smart solutions to food post-harvest losses.

In 2019, GrainPro defined several key social and environmental issues that align our corporate goals with the SDGs. From this point on, GrainPro's work will be measured by our sustainability impact. We hope to become essential to each and every community we work with - by creating a more food secure and prosperous future in the regions where we are privileged to work.



**JORDAN DEY**  
President









Website: [www.grainpro.com](http://www.grainpro.com)  
Email: [customercare@grainpro.com](mailto:customercare@grainpro.com)

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