

Investing in Food Safety & Nutrition: Proposed Benefits & Monetization Methods

April 2023



Return on Sustainability Investment (ROSI™) Framework

Sustainability Drivers of Financial Performance & Competitive Advantage

Embed:

When companies embed sustainability risks and opportunities into their strategy and decision-making processes, they...



Improve:

- Risk Management
- Stakeholder Engagement
- Operational Efficiency
- Talent Management
- Supplier Relations
- Media Coverage
- Customer Loyalty
- Sales & Marketing
- Innovation

Drive:

- Revenue Growth
- Greater Profitability
- Higher Corporate Valuation

Deliver:

Quantifiable Business Value & Positive Societal Impact



 **NYU | STERN**

Center for Sustainable Business

By embedding ESG risk and opportunities within core business strategy, the return on sustainable investment can be quantified, delivering the possibility of both financial value and positive societal impact.

Overview of Food & Agriculture Framework

NYU Stern CSB is developing a ROSI™ framework for food & agriculture with publicly available monetization tools to help the industry understand where and how sustainability can unlock financial value.

Based on research, experience, and engagement with industry leaders, we have identified the following sustainability strategies* used by the industry to include in the framework:

Water security

Soil health

Climate change

Chemical management

Biodiversity and ecosystem
conservation

Animal stewardship

Food waste management

Sustainable sourcing

Food safety and nutrition

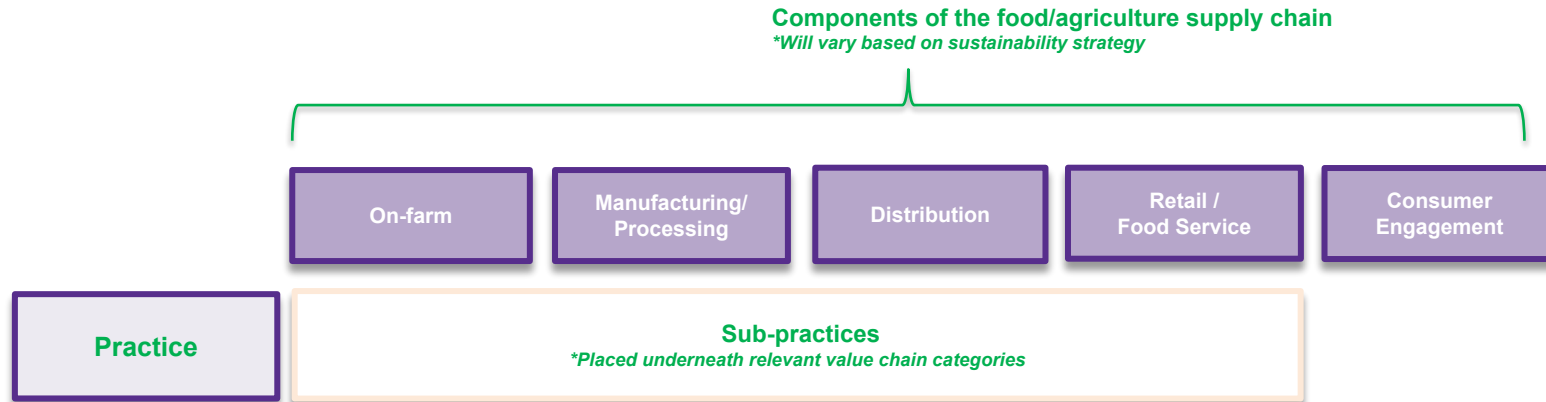
Sustainable packaging

Employee and supplier
well-being

Brand marketing and
communications

Identified Sustainability Practices and Sub-Practices Framework Layout

- Through our research, we identified key sustainability practices and sub-practices food and agriculture supply chains are implementing to achieve their sustainability strategies
- Each strategy includes sub-practices which are mapped under the relevant components of the food/agriculture supply chain, (if not relevant to a part of the supply chain, it is excluded)
- There are some benefits that are referenced across multiple strategies
- Compliance / enforcement practices are not explicitly listed in this framework but should be considered when implementing the twelve strategies
- Please see diagram below of the framework layout, which is illustrated for each strategy in the subsequent slides



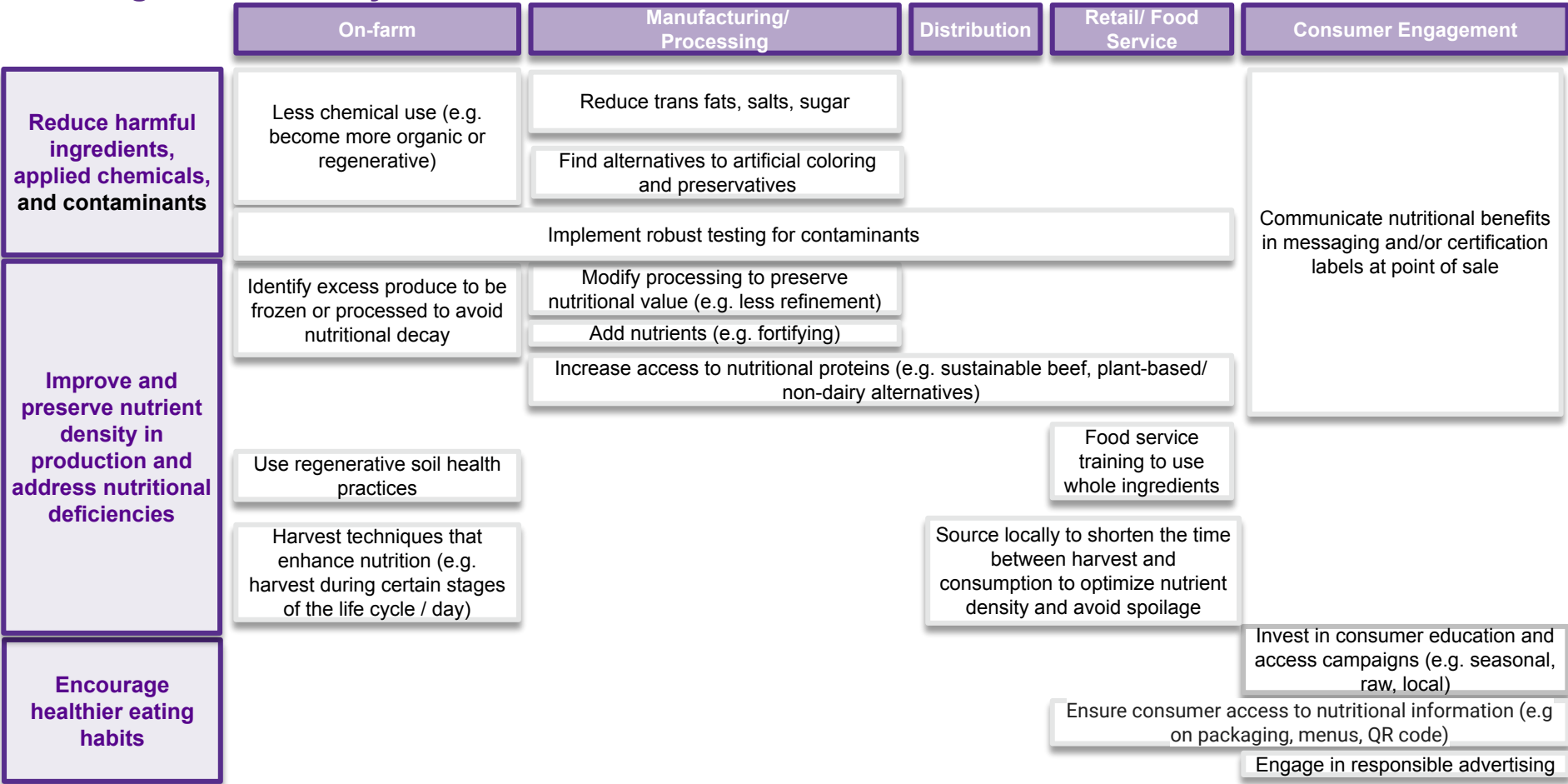


NYU | STERN

Center for
Sustainable Business

Investing in Food Safety & Nutrition

Investing in Food Safety & Nutrition





NYU | STERN

Center for
Sustainable Business

Monetization Approach

Investing in Food Safety & Nutrition

Overview of Sustainability Strategy and Relevant Impact Categories

In the following slides, we will be focusing on benefits from the *Food Safety & Nutrition* strategy, which are categorized based on the relevant impact categories highlighted below

Sustainability Strategy Definition

Investing in Food Safety & Nutrition

Food and Agriculture supply chains are investing in strategies to increase the nutritional profile of their products to meet evolving consumer preferences for safety and quality

Relevant Impact Categories

Benefits that...

Operational Efficiency (OE)

Optimize corporate and supply chain efficiencies to lower cost and increase profits

Sales and Marketing (SM)

Increase volume of sales through brand and marketing policies

Customer Loyalty (CL)

Attract an increasing community of conscious buyers & consumers, while reducing retention costs

Risk Management (RM)

Encourage risk mitigation and resilience within the value chain

Investing in Food Safety & Nutrition

Overview of Sustainability Strategy and Relevant Impact Categories

In the following slides, we will be focusing on benefits from the *Food Safety & Nutrition* sustainability strategy, which are categorized based on the relevant impact categories highlighted below

Relevant Impact Categories

Benefits that...

Stakeholder Engagement (SE)

Improve goodwill among the broader stakeholder community (i.e. NGOs)

Talent Management (TM)

Attract and retain high-quality internal talent

Supplier Relations (SR)

Improve upon the relationships between the company and its suppliers

Media Coverage (MC)

Increase a company's media presence with the development of traditional and social media content

Innovation (IN)

Create new revenue streams using sustainable business models

Reducing Harmful Ingredients, Chemicals, & Contaminants ON FARM

Overview of Benefits and Monetization Methods

Practice	Sub-Practice	Metric #	Proposed Benefits	Impact Category	Suggested Monetization Methods
Reduce harmful ingredients, chemicals, and contaminants	Less chemical use (e.g. organic or regenerative)	NF-1	Increased productivity and fertility of land	OE	Measure and compare per/acre yields YoY before and after implementation of practice, less costs associated with transition to less chemical use
		CH-6	Improve cost efficiency of input use	OE	Calculate improved use efficiency (compare before and after input applied/unit of crop production) resulting from the change in inputs. Calculate the cost efficiency (compare before and after cost/ton) resulting from the change in inputs
	Implement robust testing for contaminants	NF-11	Reduced risk of sales loss associated with spoiled product or product that is recalled	SM	Calculate avoided sales loss by multiplying historical average volume of spoiled and/or recalled product by price per product, less costs associated with investment
		NF-12	Avoided costs associated with fines or lawsuits from consumption of contaminated product	RM	Estimate risk of contamination incident and multiply by resolution costs such as fines or legal costs associated with lawsuits, less costs associated with investment
		NF-13	Reduced risk of reputational damage and associated brand value	RM	Estimate loss of sales due to negative media and associated customer loss, less costs associated with investments

OE
SM
CL
RM

= Impact categories based on color coding illustrated on previous slides

Investing in Nutrient Density in Production, ON FARM

Overview of Benefits and Monetization Methods

Practice	Sub-Practice	Metric #	Proposed Benefits	Impact Category	Suggested Monetization Methods
Improve and preserve nutrient density in production and address nutritional deficiencies	Use regenerative farming practices	NF-1	Increased fertility and productivity of land	OE	Measure and compare per/acre yields YoY before and after implementation of practice, less associated costs
	Harvest and handling techniques that enhance nutrition, eg, harvest during certain stages of life cycle, different times of day	NF-1	Increased fertility and productivity of land	OE	Measure and compare per/acre yields YoY before and after implementation of practice, less associated costs
		NF-2	Potential to increase sales volume or price by meeting evolving customer preferences	SM	Estimate potential increase in sales volume or price and apply margins dependent on associated costs (e.g. use percentage growth of customer segments to estimate increase)

Investing in Reduce Harmful Ingredients, Chemicals, & Contaminants

COMPANIES

Overview of Benefits and Monetization Methods

Practice	Sub-Practice	Metric #	Proposed Benefits	Impact Category	Suggested Monetization Methods
Reduce harmful ingredient, applied chemicals, and contaminants	Reduce or eliminate trans fats, salts, sugar and Find alternatives to artificial coloring and preservatives	NF-3	Eliminate risk of legislation requiring elimination or reduction of trans fats, sugars, artificial color, etc.	RM	Avoided cost of either having to address formulations within a short time period (lost sales due to production delays, additional labor and/or higher ingredient costs, etc), or the cost of fines and penalties, less costs associated with investment
		NF-4	Opportunity to attract new customers	SM	Compare sales volume per customer before and after launch of the initiative and multiply by average price per unit of product and number of customers and reduce by any incremental costs associated (e.g. ingredient prices, labor, etc.)
		NF-5	Opportunity to charge a premium	SM	Gather historical sales data (volume, average sale price and margins) before and after the product changes. Estimate the sales impact due to adding certifications or nutritional changes (overall increase, or change in mix if operating at capacity) and calculate the profit margins. Compare profit results to historical levels (or forecast that excludes adding certifications) to calculate the earnings benefits
		NF-6	Reduced input costs	OE	Calculate unit input costs before and after product change and then multiply by the volumes

Investing in Nutrient Density in Production, COMPANIES

Overview of Benefits and Monetization Methods

Practice	Sub-Practice	Metric #	Proposed Benefits	Impact Categ.	Suggested Monetization Methods
Improve and preserve nutrient density in production, address nutritional deficiencies	Modify processing to preserve nutrients (eg. preserving whole grains, less heating/drying or refinement)	NF-4	Opportunity to attract new customers	SM	Compare sales volume per customer before and after launch of the initiative and multiply by average price per unit of product and number of customers and reduce by any incremental costs associated (e.g. ingredient prices, labor, etc.)
		NF-5	Opportunity to charge a premium	SM	Gather historical sales data (volume, average sale price and margins) before and after the product changes. Estimate the sales impact due to adding certifications or nutritional changes (overall increase, or change in mix if operating at capacity) and calculate the profit margins. Compare profit results to historical levels (or forecast that excludes adding certifications) to calculate the earnings benefits
		NF-6	Reduced input costs	OE	Calculate unit input costs before and after product change and then multiply by the volumes
	Add nutrients (e.g. fortifying)	NF-2	Opportunity to diversify income streams to meet evolving customer preferences	SM, CL	Estimate potential increase in sales volume or price and apply margins dependent on associated costs (e.g. use percentage growth of customer segments to estimate increase)
	Source locally to shorten the time between harvest and consumption to optimize nutrient density and reduce risk of spoilage	NF-4	Reduced transportation and storage costs	OE	Compare costs associated with distribution/storage before and after sourcing locally
		NF-5	Opportunity to attract new customers	SM	Gather historical sales data (volume, average sale price and margins) before and after the product changes. Estimate the sales impact due to adding certifications or nutritional changes (overall increase, or change in mix if operating at capacity) and calculate the profit margins. Compare profit results to historical levels (or forecast that excludes adding certifications) to calculate the earnings benefits

Investing in Nutrient Density in Production, COMPANIES

Overview of Benefits and Monetization Methods

Practice	Sub-Practice	Metric #	Proposed Benefits	Impact Categ.	Suggested Monetization Methods
Improve and preserve nutrient density in production, address nutritional deficiencies	Source locally to shorten the time between harvest and consumption to optimize nutrient density and reduce risk of spoilage	NF-4	Reduced transportation and storage costs	OE	Compare costs associated with distribution/storage before and after sourcing locally
		NF-5	Opportunity to attract new customers	SM	Gather historical sales data (volume, average sale price and margins) before and after the product changes. Estimate the sales impact due to adding certifications or nutritional changes (overall increase, or change in mix if operating at capacity) and calculate the profit margins. Compare profit results to historical levels (or forecast that excludes adding certifications) to calculate the earnings benefits
		NF-10	Reduced risk of sales loss associated with spoiled and/or recalled product	SM	Calculate avoided sales loss by multiplying historical average volume of spoiled and/or recalled product by price per product, less associated investment costs

Investing in Nutrient Density in Production, COMPANIES

Overview of Benefits and Monetization Methods

Practice	Sub-Practice	Metric #	Proposed Benefits	Impact Categ.	Suggested Monetization Methods
Improve and preserve nutrient density in production, address nutritional deficiencies	Increase access to nutritional proteins (e.g. sustainable beef, plant-based & non-dairy alternatives)	NF-2	Opportunity to diversify income streams to meet evolving customer preferences	SM	Estimate potential increase in sales volume or price and apply margins dependent on associated costs (e.g. use percentage growth of customer segments to estimate increase)
	Food service training to utilize whole ingredients to enhance diversity of nutrients	FW-14	Reduce costs associated with being able to purchase less new product	OE	Calculate the volume of waste that can be repurposed into new product and multiply by market value price per food

Investing in Healthier Eating Habits, COMPANIES

Overview of Benefits and Monetization Methods

Practice	Sub-Practice	Metric #	Proposed Benefits	Impact Categ.	Suggested Monetization Methods
Encourage healthier eating habits	Invest in consumer education and access campaigns (e.g. seasonal, raw, local)	NF-6	Builds trust - trust drives purchasing and brand advocacy	CL	Compare sales volume per customer before and after launch of the initiative and multiply by average price per unit of product and number of customers, less associated investment costs
	Ensure consumer access to nutritional information (e.g on packaging, menus, QR code)	NF-7	Risk mitigation and cost savings related to future regulations	RM	Avoided cost of rushed implementation of legislation requiring inclusion of nutritional benefits/ingredients on menu. Cost of rush orders for signage, additional packaging, replacing products on shelves at retail (labor, missed sales due to disruption, transportation, etc), less associated costs of making changes now
	Engage in responsible advertising	NF-8	Risk mitigation and cost savings related legal accountability for false health claims and unfair demographic targeting	RM	Avoided cost of fines/penalties, less costs associated with investments
		NF-9	Reduced reputational risk associated with false claims of health benefits	RM	Estimate loss of sales due to negative media and associated customer loss, less costs associated with investments



NYU | STERN

Center for
Sustainable Business