

Complex Foods and Beverages

Sustainability Insights



Product Description

Complex Foods and Beverages include foods and beverages made of multiple ingredients. Product types include chocolate, convenience meals, jams, juice, pet food, soup, soft drinks, spirits and liquors, baked goods, and vitamins and supplements.

Mission

The mission of The Sustainability Consortium (TSC) is to improve the sustainability of products when they are made, purchased, and used, with a focus on manufacturers and the retail buyers who decide what products to carry in stores. The information in this document is drawn from our detailed research on known and potential social and environmental impacts across product life cycles. TSC acknowledges that other issues exist, but we have included here those that are most relevant to the decision making of retail buying teams and manufacturers. The topics are listed alphabetically for ease of reading; the order does not represent prioritization or other criteria.

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Animals

Animal welfare

Final product manufacturers should source from animal product suppliers with comprehensive management plans, including certification programs, that ensure animal welfare for farm animals. Plans or programs should include practices that avoid painful procedures; ensure access to adequate housing and proper nutrition; require proper handling, proper transportation and humane slaughter methods; and promote good health in ways that are appropriate for the animal ingredient used.



Managing the Supply Chain

Land and Soil

Improper soil management can remove nutrients, release greenhouse gases, and cause soil loss, while clearing land for ingredient production can lead to deforestation. Farm operations should use efficient soil management practices, including reduced soil tilling when applicable and prevention of soil erosion. Final product manufacturers should use sourcing policies that monitor progress on zero deforestation commitments. Sourcing policies should also promote protection of high conservation value forest habitats, which have unique plants and animals. This reduces the risk of biodiversity loss, diminished ecosystem quality, and increased greenhouse gas emissions that can occur when forests are cleared for ingredient production.

Palm Oil

Many complex foods and beverages contain palm oil palm, kernel oil, or ingredients that have been chemically derived from these oils. Palm oil production is one of the leading causes of deforestation, which is a significant contributor to climate change. The cultivation of palm oil also impacts climate, land, and water. Improper palm oil production and management may also lead to worker exploitation and threats to worker health and safety. Final product manufacturers should select ingredient suppliers that are working to improve sustainability and adopt standard guidelines from the Roundtable on Sustainable Palm Oil (RSPO) or other certifications.

Supply Chain Transparency

Addressing many of the environmental and social challenges within a food and beverage supply chain requires cooperation among companies at different stages of the supply chain. Final product manufacturers should determine the locations of farm operations and processing facilities that produce their ingredient supply and engage in initiatives that improve transparency, communication, and data sharing. Suppliers can work together to address common issues, such as energy use, water availability and quality, chemical use, worker health and safety, and labor rights.

Water

Ingredient production and processing can use a significant amount of water and contribute to freshwater depletion, which is problematic in water-stressed

regions. Farm operations can measure and track water use and use methods such as precision agriculture, which applies only the amount of water needed, or irrigation water management to improve water efficiency. Final product manufacturers can perform water use assessments throughout their supply chain in order to map water risk in different geographical regions and mitigate impacts associated with freshwater depletion.



Use of Resources

Climate and Energy

Final product manufacturing, ingredient processing, and farm operations all require significant amounts of energy leading to greenhouse gas emissions. Fertilizers and transportation vehicles can also emit these gases. Farm operations, ingredient processors, and final product manufacturers can reduce these impacts by measuring and tracking energy use, performing preventative maintenance on equipment, and replacing inefficient equipment. Additionally, farm operations can minimize impacts by implementing a nutrient management plan, using precision agriculture, which applies only the amount of fertilizer needed, and using low-energy irrigation. Farm operations can also optimize feed yield and feeding of animals and the size and efficiency of farm vehicles. Final product manufacturers can improve transportation efficiency by maximizing load capacity in vehicles through increased packaging cube utilization.

Food Waste

Food and beverages that are not stored and processed properly can go bad or be damaged after which they are often disposed of in landfills, leading to a waste of resources and food. Ingredient producers and processors should store ingredients in clean, cool places to protect them from spoiling. Final product manufacturers should consider improving technologies and staff training to reduce spoilage as well as alternatives to landfills, such as donations to food banks, use as animal feed, or use for energy recovery.

Packaging

Packaging design should be optimized to ensure that packaging performs its essential functions of containment and protection while minimizing use of materials, energy resources, and environmental impacts across the life cycle of the packaged product. Under-packaging and over-packaging can both lead to increased impacts. These impacts may be mitigated by using more energy-efficient manufacturing, creating packaging materials from renewable resources, designing packaging to be recyclable, and encouraging consumer recycling.



Workers and Communities

Workers

Workers, especially women and migrants, may face unfair pay, discrimination, and limited freedoms. They may also be exposed to dust, chemicals, or other industrial hazards. To help ensure worker health and safety, final product manufacturers should have a documented health and safety management plan, including a chemical management plan where needed, and provide safety training and personal protective equipment to workers in their facilities. Final product manufacturers should procure ingredients from suppliers that transparently address worker health and safety and labor rights during ingredient production and processing and perform audits when needed.