THESIS
BY THE SUSTAINABILITY CONSORTIUM

Product Description

Sweet and savory food mixes made from grains and other ingredients. Includes, but is not limited to, bread mix, brownie mix, cake mix, cookie mix, pancake mix, waffle mix, and pizza crust mix. Does not include flour or starch.

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.

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

Palm Oil

Many cookies and baked goods 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 suppliers that are working to improve sustainability and adopt standard guidelines from the Roundtable on Sustainable Palm Oil (RSPO) or other certifications.

Pollution

Final product manufacturers should improve housekeeping and facility processes and implement air emission control techniques in order to minimize risks and control air quality. This is important because particulate matter, odor, volatile organic compounds, dust, and refrigerants can escape manufacturing facilities and cause air pollution, posing risks to the environment and workers.

Supply Chain Transparency

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

Use of Resources

Climate and Energy

Farm operations, ingredient processing, and final product manufacturing can consume significant amounts of energy leading to greenhouse gas emissions. Fertilizers and transportation vehicles can also emit these gases. Farm operators, 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 operators can minimize impacts by implementing a nutrient management plan, using precision agriculture, which applies only the amount of fertilizer needed, or low-energy irrigation. Farm operators can also optimize feed yield and feeding of animals as well as 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 that are not stored and processed properly can go bad or be damaged after which it is often disposed of in landfills, leading to a waste of resources and food. Final product manufacturers should consider improving technologies and staff training to reduce spoilage, and alternatives to landfills, such as donations to food banks or use as animal feed.

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 and sustainable resources, and energy recovery from non-recyclable packaging.

Water

Ingredient production and final product manufacturing can use a significant amount of water and contribute to freshwater depletion, which is problematic in water-stressed regions. Farm operators 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. Manufacturers can perform water assessments throughout their facilities and supply chains in order to map water risk in different geographical regions and mitigate impacts associated with fresh water depletion.

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 and ingredient producers should provide safety training and personal protective equipment to workers in their facilities or on farms. Manufacturers should procure ingredients from suppliers that transparently address worker health and safety and labor rights and perform audits when needed.