



Product Description

Grains include food products composed only of grains (the edible seeds of grasses in the Poaceae plant family). Product types include barley, corn, oats, rice, wheat, sorghum, and flour.

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.



Managing the Supply Chain

Biodiversity

Certain global pollinator populations, including honey bees, other managed bees, and wild bees, are experiencing increased health and population challenges due to a diverse mix of factors including parasites, pathogens, predators, exposure to crop and bee protection products, habitat loss, lack of nesting sites, poor-quality forage, and queen issues. Growers can help to reduce these impacts by using integrated pest management, planting pollinator habitat on marginal land, and maintaining natural habitat around the farm. Supply chain partners can conduct research on the causes of pollinator decline and invest in prevention and mitigation practices.

Pesticides

Improper use of pesticides can impact workers and nearby eco-systems and communities. If growers use pesticides, they should read the label and follow usage directions exactly. Workers should be trained and provided with protective gear to prevent exposure to themselves and the environment during handling or application. Consultation with experts can help determine the appropriate selections, forms, timing, and amounts of pesticides for pest problems.

Supply chain transparency

Addressing many of the environmental and social challenges within an agriculture supply chain requires cooperation among companies at different stages of the supply chain. Final product manufacturers should determine the locations of farms that produce their 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.



Use of Resources

Climate and energy

The production of crops requires significant amounts of energy. The burning of fossil fuels to produce this energy, as well as the production and use of fertilizers, results in greenhouse gas emissions. Growers can reduce these impacts by measuring and tracking energy use, performing preventative maintenance on equipment, and replacing inefficient equipment. Additionally, growers can

minimize impacts by implementing a nutrient management plan, using precision agriculture, which applies only the amount of fertilizer needed, or low-energy irrigation, and optimizing the size and efficiency of farm vehicles.

Fertilizer and Nutrients

Improper management and use of fertilizers can lead to local water pollution and release greenhouse gases during production. Growers should use a nutrient management plan to improve the efficiency of fertilizer and manure use for production. Growers can also use precision agriculture, which applies only the amount of fertilizer needed. Where appropriate, growers can plant vegetative buffer zones around streams to help prevent water pollution via nutrient runoff.

Land and Soil

Improper soil management can result in nutrient and soil loss and release greenhouse gases, while clearing land for agriculture can lead to deforestation. Growers should use soil management practices, including reduced soil tilling, when applicable. 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 agriculture.

Water

Farming can use a significant amount of water and contribute to freshwater depletion, which is problematic in water-stressed regions. Growers 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.



Workers and Communities

Forced or Child Labor

In some areas, there is a risk of forced or child labor, characterized by actions such as trafficking, withholding wages or documents, and restricting workers to the work site. Final product manufacturers should determine if and where forced or child labor occurs and work with supply chain partners and experts to address these issues to ensure that all workers have fair working conditions.

Smallholder Farmers

Growers on small farms, called smallholder farmers, may have limited access to information, technology, and resources. Final product manufacturers should determine where their crops are grown, understand if they source from small farms, and work with organizations that help smallholder farmers overcome challenges and achieve greater and more sustainable results.

Workers

Farm workers, especially women and migrants, may face unfair pay, discrimination, and limited freedoms. They may also be exposed to chemicals, dust, or other hazards. Final product manufacturers can implement programs to ensure that they are sourcing from growers who protect labor rights and ensure the health and safety of their workers.