

# Plant-based Dairy Alternatives

## Sustainability Snapshot



### Product Description

Beverages and other food products (other than frozen desserts) made from nuts, grains, or oilseeds blended with water and other ingredients. Includes, but is not limited to, almond milk, rice milk, coconut milk, soy milk, yogurt, cheese, and creamer. Does not include dairy, animal milk, or non-dairy ice cream.

### 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

#### Palm Oil

Many non-dairy products 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. Palm oil cultivation 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.

#### 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. Manufacturers should determine the locations of farms 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.



### Use of Resources

#### Climate and Energy

Ingredient processing and final product manufacturing can consume significant amounts of electricity and energy, resulting in greenhouse gas emissions; fertilizers can also emit these gases. Manufacturers and 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.

## **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.

## **Water**

Ingredient production 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**

### **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. Manufacturers should procure materials from suppliers that transparently address worker health and safety and labor rights and perform audits when needed.