

Ecospan Environmental Footprint Overview

Introduction:

Ecospan's (www.ecospan.com) proprietary bioplastic resin compound formulations, marketed under the trade name BioFlow™, are currently derived using a base biopolymer, Ingeo™, sourced from NatureWorks (www.natureworksllc.com), a subsidiary of Cargill Corporation (www.cargill.com). Ingeo™ is currently derived from Number 2 Dent Field Corn grown within a 50-mile radius of NatureWorks' Blair, Nebraska manufacturing facility.

NatureWorks' overall footprint of its Blair facility is small – at full capacity Ingeo™ will use less than two tenths of one percent of the U.S. corn production – an amount equal to less than 1/20th of 1.0% of the global corn production. By contrast, about 30% of the U.S. crop is used for ethanol production – a difference of more than 300-fold. By any measure, bioplastics are a tiny factor regarding global demand for crops.

Transitioning To Non-Food Plants and Agricultural Wastes:

Despite the negligible impact of bioplastics on demand for corn, Ecospan and NatureWorks aim to transition into cellulosic raw materials (i.e., feedstock) sourced from non-food plants and agricultural wastes. This innovation is a journey, in which corn is only the starting point, not the destination. In North America, corn has been used first because it is the most economically feasible source of the plant starches used to produce Ingeo™. Ingeo™ doesn't require corn – it requires a sugar source – whatever is the most readily available depending on the geography.

Carbon Footprint:

Based on peer-reviewed studies, the production of Ingeo™ uses 65% less fossil fuels and emits 65% less greenhouse gases than traditional oil-based plastics. Greenhouse gas reductions associated with Ingeo™ will be further improved with imminent enhancements to the bio-technology and increased scale.

Disposal Options:

From a closed-loop “cradle-to-cradle” viewpoint, Ecospan's compounds and products provide more end-of-use options than any other plastic. They can be mechanically recycled, as well as composted. And in geographies where appropriate, they can be cleanly incinerated creating no dioxins unlike traditional oil-based plastics. When land-filled, decomposition occurs much more rapidly than oil-based plastics. Ecospan also strongly encourages its partners and their customers to promote closed-loop systems and/or to reuse our products wherever possible.