

MYTH VS. FACT:

BIO-BASED PLASTICS

BREAKING DOWN COMMON MYTHS ABOUT BIO-BASED PLASTICS

MYTH

“Bio-based plastics will contribute to converting land to agriculture”

MYTH

“Bio-based plastics are no better for climate change”

MYTH

“Bio-based plastics are biodegradable”

FACT

The amount of land used to grow bio-based plastic feedstock is miniscule compared to other uses: in 2020, 0.05% of global arable land, or 0.7 million hectares was used to grow feedstocks for bio-based plastics globally, and that's only estimated to increase to 1.1 million hectares by 2025.

FACT

Bio-based plastics are made from renewable resources like plants rather than finite resources like fossil fuels that are used to make traditional plastics.

Some plant-based plastic resins are derived from feedstocks which remove carbon dioxide (CO₂) from the atmosphere during their growing phase. This is in contrast to traditional plastics which are derived from fossil carbon and add to the atmospheric stock of carbon at the end of their useful life.

FACT

The United States Department of Agriculture (USDA) defines bio-based products as ones that are derived from plants and other renewable agricultural, marine, and forestry materials. This derivation must be demonstrated through a determination of bio-based carbon content through standard test methods such as ASTM D6866. Bio-based does not refer to a product's end-of-life options – it simply refers to the materials from which it is made.

End-of-life options include compostable and biodegradable, which are vastly different. To be considered compostable, the plastic must be able to break down in a certain timeframe in the conditions of a commercial composting facility. Per ASTM, the material has to disintegrate within 12 weeks and biodegrade at least 90% within 180 days. Compostable is a more defined, smaller subset within “biodegradable” umbrella.