

Tequila by-product for sustainable car materials

Ford Motor Company is teaming up with Jose Cuervo to explore the use of the tequila producer's agave plant by-product to develop more sustainable bioplastics to employ in Ford vehicles.



Ford and Jose Cuervo are testing the bioplastic for use in vehicle interior and exterior components such as wiring harnesses, HVAC units and storage bins. Initial assessments suggest the material holds great promise due to its durability and aesthetic qualities. Success in developing a sustainable composite could reduce vehicle weight and lower energy consumption, while paring the use of petrochemicals and the impact of vehicle production on the environment.

The growth cycle of the agave plant is a minimum seven-year process. Once harvested, the heart of the plant is roasted, before grinding and extracting its juices for distillation. Jose Cuervo uses a portion of the remaining agave fibres as compost for its farms, and local artisans make crafts and agave paper from the remnants.

Now, as part of Jose Cuervo's broader sustainability plan, the tequila maker is joining forces with the automaker to develop a new way to use its remnant fibres.



Abundant and underutilised

The collaboration with Jose Cuervo is the latest example of Ford's approach to product and environmental stewardship through the use of biomaterials. Ford began researching the use of sustainable materials in its vehicles in 2000. Today, the automaker uses eight sustainable-based materials in its vehicles including soy foam, castor oil, wheat straw, kenaf fibre, cellulose, wood, coconut fibre and rice hulls.

According to the United Nations Environment Programme, 5 billion metric tons of agricultural biomass waste is produced annually. A by-product of agriculture, the supply of materials is abundant and often underutilised. Yet the materials can be relatively low cost, and can help manufacturers to offset the use of glass fibres and talc for more sustainable, lightweight products.

"There are about 181 kilograms of plastic on a typical car," said Debbie Mielewski, Ford senior technical leader, sustainability research department. "Our job is to find the right place for a green composite like this to help our impact on the planet. It is work that I'm really proud of, and it could have broad impact across numerous industries."

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