

# Technology could increase the production of plant-based industrial materials like natural rubber

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An agricultural technology accelerator has licensed a Purdue innovation that could increase natural rubber production and expand production to new geographies.

Ag TechInventures (AgTI) brings together and further develops promising intellectual property in agbiotech, precision agriculture and bio-renewables, to form new spinoff companies that address the unmet needs of the agricultural industry.

AgTI's first startup, Edison Agrosiences, is developing a technology that could increase the production of plant-based industrial materials, with a primary focus on natural rubber.

"The United States is dependent on imported [natural rubber](#) largely from Southeast Asia, which produces over 90 percent of the world's supply. Natural rubber has performance characteristics that have not been able to be duplicated by synthetics, making it impossible to replace in many applications," said Karen LeVert, chief operating officer at Ag TechInventures. "Edison is advancing research in a Purdue and Ohio State University technology to develop a sunflower rubber crop that will serve to diversify global rubber production and provide the U.S. with an alternative source for this strategically important commodity."

AgTI licensed a Purdue innovation that could improve the quality of

plants generated by the transformation process and can improve the overall genetic engineering of crops.

"Our hope is the technology significantly reduces the number of undesirable transfer-DNA insertions and thereby reduces the costs associated with screening and molecular characterization of transgenic plants," said Thomas Hohn, chief technology officer at Edison Agrosiences. "The technology combines a novel transfer-DNA vector delivery system with the addition of the vector of a gene that increases the efficiency of plant transformation which can help to develop the sunflower rubber crop."

The innovation was developed in the laboratory of Stanton B. Gelvin, Edwin Umbarger Distinguished Professor of Biology in the College of Science. AgTI licensed the innovation through the Purdue Research Foundation Office of Technology Commercialization. More than 20 startups based on Purdue intellectual property were launched in the 2015 fiscal year.

Provided by Purdue University

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