Bridgestone working towards more sustainable rubber supplies

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Bridgestone Collaborating with NRgene on Guayule Research.

Collaboration will sequence and assemble guayule genomes…

Bridgestone Americas (Bridgestone) and NRGene, a genomic big data solutions company, are collaborating on research efforts to enhance the company's U.S. alternative domestic natural rubber breeding program. They will be working in tandem to sequence and assemble multiple genomes of guayule, a rubber-producing plant indigenous to the hot, dry environments of the Southwestern United States and North Central Mexico, to develop new, high-yielding varieties. The first-ever, two guayule genomes have already been sequenced and completely assembled and a physical and genetic map are being developed which will provide a high level of accuracy and efficiency for breeding improvement.

"We are looking forward to utilizing NRGene's capabilities and experience in agricultural

genome analytics to move our guayule breeding program to a new level that will ultimately benefit our customers and society," said Nizar Trigui, chief technology officer, Bridgestone Americas. "This will quickly bring the most advanced molecular breeding capabilities previously found only in advanced row crops to guayule, an undomesticated species."

NRGene's DeNovoMAGICTM 3.0 will develop high-quality, comprehensive genome assemblies of multiple varieties of guayule to uncover and utilize the genetic variation in the species. The genome assemblies also will open the potential to accelerate genetic gains by reducing the time for selection cycles of important traits including overall rubber yield. The system can be used to impute sequence level information from molecular marker data to design the most efficient markers associated with rubber yield traits and traits that protect the plant from stresses and diseases.

Bridgestone is committed to developing a sustainable guayule natural rubber industry in North America for tyre production. The firm has a team of scientists working to improve productivity of the crop though breeding and genetics, agronomy, and working with growers.

NRGene is a genomic big data company developing cutting-edge software and algorithms to reveal the complexity and diversity of crop plants, animals and aquatic organisms for supporting the most advanced and sophisticated breeding programs. NRGene tools have already been employed by some of the leading seed companies worldwide as well as the most influential research teams in academia.

"Rubber is critical to every aspect of our lives, from tires to medical devices," says Dr. Gil Ronen, CEO of NRGene. "Sustainable use of our natural resources is always a key concern, so this represents a major step forward. With more insights into guayule, Bridgestone will be able to increase rubber yields while reducing the resource requirements."

The company also adds… 'Bridgestone Group's global corporate social responsibility commitment, "Our Way to Serve," reflects the company's longstanding philosophy of

Serving Society with Superior Quality and its recognition that the best companies not only perform for their stakeholders, but also contribute to a better world. Guided by “Our Way to Serve,” Bridgestone recently announced a new Global Sustainable Procurement Policy to help identify and evaluate qualified suppliers, promote best practices and serve as a communication and improvement tool for the industry. The policy applies to all suppliers and all purchased materials and services, including natural rubber, and aligns with Bridgestone’s goal of using 100 percent sustainable materials by 2050’.