Hort Innovation

media release

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TREE GENOMICS PROGRAM SEQUENCES 300 MACADAMIA VARIETIES TO IMPROVE PRODUCTIVITY AND PROFITABILITY FOR GROWERS

The National Tree Genomics program is in the final stages of sequencing over 300 macadamia wild and cultivated varieties. The national program harnesses cutting-edge genetic technologies for the benefit of Australian horticultural tree crop industries. New tools are currently being developed that will equip Australian plant breeders to deliver new varieties with key productivity and profitability traits. New tools will also stem from this program for growers to enhance farm productivity.

The program involves separate components working together to deliver a deeper understanding of the relationship between tree crop traits and their underlying genetics and genetic mechanisms.

Hort Innovation Research and Development Manager Dr Vino Rajandran said, "Sequencing these diverse wild and cultivated varieties of macadamia trees is extremely important. The new knowledge gained from this research allows the Australian industry to explore new and innovative ways to boost productivity and profitability through genetics. The Hort Innovation Macadamia Breeding Program will be critical in converting this new knowledge into new varieties for Australian growers".

CEO of the Australian Macadamia Society Jolyon Burnett said, "The national breeding program is one of the most significant investments the industry is making in R&D. We are investing because we are confident that we can build on the genetic diversity in the wild macadamia trees to develop new cultivars with improved attributes for both growers and global consumers. These improved varieties should give Australian growers a competitive advantage over macadamia growers in other countries and see Australian macadamias remain the best of the best."

University of Queensland Professor Robert Henry said, "We are working with partners to assemble an extensive map of the genetic make-up of the nation's five leading tree crops, and this will give us a more precise basis for breeding future crops for specific key traits."

Vino said, "This is a great example of how the National Tree Genomics program, a Hort Innovation Frontiers Fund investment, can work with the grower levy-funded Macadamia Breeding program to deliver outcomes for Australian growers. It also demonstrates how collaboration between several research, university and government organisations and growers can come together to deliver the future macadamia tree."

Macadamia is the second-biggest export nut in Australia after almonds, with an export value predicted to be $350 million by 2025.

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