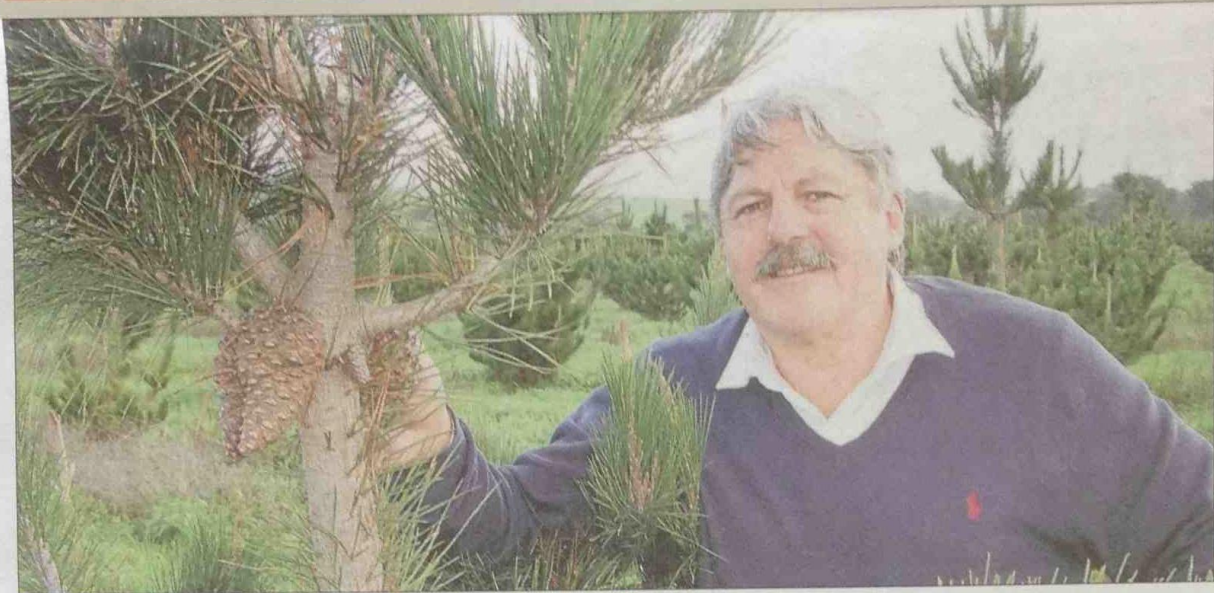


ON FARM



New funding is set to improve the accuracy of Treeplan significantly.

Funding to boost Treeplan accuracy

Dr Tony McRae, inspects next generation seed in maturing pine cones at the national breeding arboretum in Mount Gambier SA.

Treeplan's goal to make bigger and better trees

BY AMELIA WILLIAMS

IF YOU'VE been thinking that you've seen a lot more tall, straight and quality looking plantation trees lately, you're probably not imagining it. Just like genetics and DNA have become a crucial part of cattle and sheep development, with concepts like BREEDPLAN and LAMBPLAN, scientists have been working towards using the same concept to produce healthier, more productive trees with higher quality timber. The idea of TREEPLAN

isn't new- it was first developed back in 2000 when the Southern Tree Breeding Association partnered with the Animal Genetics and Breeding Unit (AGBU) to build a global based system that could handle the peculiarities of trees. TREEPLAN works much like LAMBPLAN and BREEDPLAN, where performance measurements are taken from animals and their pedigree to create estimated breeding values, or EBVs, the only difference between the two concepts is you don't need dogs to round the trees up, University of New Eng-

land (UNE) Director of AGBU, Robert Banks said. Just like the animal breeding plans, scientists have conducted field trials on groups of trees spread across southern Australia. Dr Banks said during these trials, trees are measured and data evaluated using software from the breeding unit which then helps them identify trees with the best traits to use in their radiata pine tree breeding stud, located in Mount Gambier. The trees with the best genes, "stud trees" are used for breeding - Dr Banks said seed from "good parents"

are combined, just like joining a sire and dam and the progeny is then put into more trials. "You get the better genes out of the two parents and put them into a few of their better progeny," he said. Dr Banks said during the trials, things like the straightness of a tree, its wood density, its diameter and branch size are recorded. They also measure how quickly the trees are grown and their resistances to various pests and diseases. So, why go to all the effort to collect plant data? Identifying better quality seed

allows scientists to select the top of the range plants to put into tree plantations. With better genetics, STBA general manager, Dr Tony McRae said commercial trees are at the sharper end with better wood properties for structural buildings. "The timber doesn't snap or break because it's stronger, and these timber boards are what's used on Australian building sites," he said. Using this data has also helped make faster growing trees- something Dr McRae said was a very important determinant of productivity for forest growers.

AFTER receiving funding from Forest and Wood Products Australia, the Southern Tree Breeding Association (STBA) will be able to kick off a new research project set to start this week. The funding will allow the STBA to consider using molecular markers, or DNA of trees in conjunction with the usual performance data they're already collecting from trees including the growth rate of a tree, as well as its diameter. STBA general manager, Tony McRae said the funding would be a big step for TREEPLAN, assisting in improving accuracy significantly. "We'll be able to take the DNA level data and further complement the field data we have," he said. "It will improve our data accuracy, predictions will be better and will give the program a marginal kick."