

Dr Bonnett said their experiments indicated that no seeds lived longer than six months when buried at 5-10 cm and nine months when buried at 30 cm. All this means that the research has found that sugarcane seed neither exhibits dormancy nor longevity, which all pointed toward low 'weediness'. However, Dr Bonnett said that further research may be needed in the future, particularly if GM traits go down new pathways.

The first generation of GM sugarcane currently being developed is for herbicide tolerant traits. However, future generations of GM cane may look at a range of other stress tolerance traits that could include, for example, water use efficiency or water stress resistance.

If such GM traits are progressed they would be designed to improve sugarcane's performance under currently sub-optimal conditions. The research has developed ways to measure any changes in the performance of sugarcane seed's ability to survive under these conditions when compared to non-GM varieties.



Simply, researchers understand that current sugarcane seeds are generally not weedy, but the industry will also need to understand if any seeds from new GM traits are at risk of becoming more weedy. In such a case, this may need to be tested.

Above image

Dr Graham Bonnett with CSIRO checks over pot trials in the greenhouse at the CSIRO facility at the University of Queensland's St Lucia campus.

New MOU to strengthen sugarcane breeding in both Australia and Vietnam

Sugar Research Australia (SRA) and the Sugarcane Research Institute (SRI) of Vietnam have signed an historic Memorandum of Understanding (MOU) that will pave the way for exchange of genetic material between the two countries' plant breeding programs.

The 10-year MOU is aimed to allow both countries to improve their sugarcane plant breeding and deliver improved outcomes for growers and millers.

This will be done by SRA and the SRI Vietnam working collaboratively to exchange sugarcane germplasm between their respective breeding programs, as well as working cooperatively on research on sugarcane diseases and pests of mutual interest, and other collaborative research ventures such as trait development, molecular biology and crop management.

SRA Chairman Mr Paul Wright AM said that expanding the genetic base within the SRA sugarcane breeding program was vital for SRA to be able to continue to develop new and improved sugarcane varieties for growers and millers.

"SRA already has variety exchange agreements in place with more than 15 countries around the world and this new MOU with Vietnam is expected to deliver new opportunities for growers and millers, by allowing us access to a greater pool of genetic diversity," Mr Wright said. "Bringing in overseas genetics to our breeding program allows us to improve the parent population in the program."

Director General of the SRI Vietnam, Dr Nguyen Duc Quang, said that the MOU would benefit both countries' industries, as breeding material often came from different sources.

Vietnam also has some important diseases and pests which are of biosecurity concern to Australia.

"Working together, we can help lessen their impact on the Vietnamese industry, as well as ensuring that the Australian industry is well prepared for any incursion," Dr Nguyen Duc Quang said.