

Capability development, attraction and retention

A brief look at recent activity within SRA's capability, development, attraction and retention program.



'How the soil environment affects root feeding scarabs with particular emphasis on the canegrub'

Adam Frew – Sugar industry postgraduate scholarship

Recently, plant researcher Adam Frew completed his PhD thesis at the Hawkesbury Institute for the Environment at Western Sydney University with support through SRA's Capability development retention and attraction program. Adam's thesis on the interactions between the soil environment and root feeding scarabs, such as the canegrub, provides the industry with a number of applied and fundamental outputs that are directly applicable to management of canegrubs and lay important foundations for further work and pest management strategies. Adam investigated the impacts of silicon (Si) and arbuscular mycorrhizal (AM) fungi on sugarcane and the canegrub and showed a number of interesting results including that the application of both improved sugarcane performance (in pot trials) while Si also significantly reduced canegrub performance.

Adam (pictured above) presented his work at the 2017 annual conference of the Australian Society of Sugarcane Technologists (ASSCT) and has also published a number of peer-reviewed academic papers associated with his findings. Congratulations Adam!

'Delivery technology of bio-fertiliser for next-generation sugarcane cropping without pollution footprint'

Dr Chanyarat Paungfoo-Lonhienne – Early-mid career research award

University of Queensland research fellow, Dr Chanyarat Paungfoo-Lonhienne, recently completed a SRA early-mid career research award. These awards fund small projects designed to give emerging researchers the opportunity to expand their skills and/or build highly valuable collaborations in pursuit of an innovative initiative.

Chanyarat's project investigated an alternative system for plant nutrition based on Plant Growth Promoting Rhizobacteria (PGPR) in effort to explore options of increasing sugarcane biomass yield without standard inorganic fertilisers. Through small-scale greenhouse trials in association with a number of industry partners (Sustainable Organic Solutions, Wilmar BioEthanol (Ag services), Bundaberg Sugar and the Department of Agriculture, Fisheries and Forestry) she demonstrated the potential efficacy of a bio-fertiliser inoculum formulation that in combination with milling by-products and some inorganic fertiliser may deliver promising biomass yields. Chanyarat's results are vital early steps in the examination of advanced bio-fertiliser technology in the Australian sugar industry. Chanyarat is preparing a paper for publication based on her findings.