

# DR PAUL GRUNDY

QDAF, TOOWOOMBA, QLD

# DR STEPHEN YEATES

CSIRO, AYR, QLD

*CSD Researcher of the Year Finalist*

Paul and Steve are dedicated cotton research scientists with over 40 years combined research experience. Both researchers have made significant contributions to the wider cotton industry and mainstream research through their systems analysis and understanding of cotton physiology. By taking the approach of 'learning to think like a plant' they are fundamentally changing the philosophy of cotton production across the cotton industry, whether it be in northern Australia, established cotton production valleys, or the newer southern production systems.

Through rigorously planned and executed trials, and a strong understanding of cotton physiology and agronomy, Paul and Steve teased apart the intricacies of the Central Queensland production system. They analysed temperature, solar radiation, rainfall and the farming system to determine how this could be manipulated to provide better returns and a more sustainable, profitable system for CQ growers. This work has led to yields in this region increasing by up to four bales per hectare with significant improvements in lint quality. Their work is having a profound impact on the profitability of cotton growing in this region. "Through a climate analysis in Emerald we found that there was an opportunity to plant the crop much earlier than what people normally would, during late winter," Paul explains. "What that's enabled us to do is to better coincide boll filling with favourable weather during spring setting the crop up for earlier

picking that halves the chances of being affected by monsoonal influences during crop maturation and picking. The result has been a real increase in yield potential over the last couple of years and with Bollgard 3 people are now adopting the early sowing research."



The research pair were also able to develop strategies that optimised the agronomy of early sown crops to overcome constrained canopy development under the cool conditions leading up to flowering. The benefits of planting early when combined with tailored agronomic management in Central Queensland has been demonstrated with the assistance of leading growers who have hosted the commercial scale trial program. This in turn has given other local growers the confidence and understanding needed to adopt the new practices on their own farms. Working on a day to day basis with grower and consultant collaborators to implement an on farm research program has been a successful model for developing a rigorous scientific data set while also providing an opportunity for people to see problem solving and solutions in action. "It's been re-ally rewarding," Paul explains. "To begin with something that was an idea on a page, and move it from initial small plot trials on a farm, through to having growers adopting the findings commercially within a relatively short space of time, has been a really fulfilling experience."

Paul and Steve agree it's a very rewarding industry to work in. "Throughout our careers we have really enjoyed working with everyday people in the cotton industry. Being able to examine on-farm challenges and play a part in developing solutions that people put place to achieve better outcomes is a privilege," Paul says. "It would be fair to say that Steve and I didn't go into agricul-ture to enter any sort of competition, but what is really gratifying is to have our work recognised by growers and the industry. It's nice to be appreciated." Steve continues to draw motivation from the beneficiaries of his work. "I enjoy discovering something that's critical to solving a prob-lem and that creates a benefit for the grower," he explains. "I grew up on a small farm so I've always been really interested in plants, how they grow and how we interact with plants to make a living off them."



The researchers acknowledged the role played by the Researcher of the Year sponsor, Cotton Seed Distributors, both in research and the broader cotton industry. "It's great to have a compa-ny that does work hand-in-hand with researchers and support the work that they do," Paul add-ed.

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