

## Final report on capital Item (CRDC197C )- Eppendorf mastercycler

After much consideration the project grant for a thermocycler (CRDC197C) was used to purchase an Eppendorf Mastercycler gradient machine. This choice of machine gave not only the obvious advantages of having a dedicated machine for the CRC29C project, it also had advanced features that were not available with the previous instruments in use. Being able to use gradient functions to optimise multiple annealing temperatures during a single reaction contributed a five-fold reduction in time taken for primer screening. The ability to optimise speed of temperature ramping and to perform touch-down PCR is giving higher quality results in the molecular marker work, additionally faster ramping rates have greatly reduced reaction times; allowing faster turn around of samples.

The ability to purchase a new thermocycler has greatly improved the ability to meet project aims, while increasing the skill base of the primary researcher as well as cotton honours project students. This instrument continues to be an asset to this project and too any other CRDC/CRC projects conducted through the botany department at the University of Queensland.