Benefits of better preparation

Most Australian factories are not achieving the cane preparation benchmark of 90% pol in open cells. While preparation is strongly linked to power consumption, in many cases the problem is not that there is insufficient power available but that insufficient power is being consumed.
By Geoff Kent, QUT

Key Focus Area
Milling efficiency and technology
Project name
Increasing capacity to undertake cane preparation research through modelling and experimentation
Project number
2015/018
Project leader
Geoff Kent, Queensland University of Technology
Project end date
1 May 2017

An opportunity to try new shredder hammer configurations to improve preparation.

Above: The Rocky Point shredder.

This project looks at alternative shredder hammer configurations with the intent of installing more hammers in the shredder to increase power consumption and achieve better preparation. It also involves a preliminary look at alternative grid designs.

The SRA-funded project is a collaboration between Queensland University of Technology and Rocky Point Mill.

The project aims to experimentally determine the effect of different hammer configurations on maintenance requirements, vibration, noise, windage and performance.

It will be supported by a CFD modelling investigation into the windage issue.

In addition, a preliminary CFD modelling investigation into grid design will be undertaken, in preparation for grid design experiments to be undertaken in a subsequent project.

The focus this year will be on the hammer configuration work. Floren Plaza at QUT will be undertaking the CFD modelling of the windage process in order to determine the effect that different hammer configurations have on windage.

Two alternative hammer configurations will be trialled at Rocky Point this year, under the supervision of Terry Drury, Maintenance Supervisor at Rocky Point.

The configurations are expected to be spiral type designs, but final decisions have yet to be made.