

# Sugarcane research aims to harvest green energy

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(PhysOrg.com) -- Scientists based at UQ are working towards one of sustainable energy's holy grails - harvesting the untapped potential of sugar cane.

Aided by new technologies and an international research network, the Australian team aim to have the first sugarcane genome sequence ready by the middle of next year.

The Australian arm of the research project, "Understanding the Sugarcane Genome", is expected to bolster research into sought-after [energy sources](#) and provide future business opportunities for the local sugarcane industry.

Led by Southern Cross University (SCU) and funded by the UQ-based Cooperative Research Centre for Sugar Industry Innovation through Biotechnology (CRC SIIB), the research also involves contributions from the CSIRO.

Head of the research project Professor Robert Henry said sugarcane is recognised as one of the best producers of carbon when compared to other commonly grown agricultural crops, such as corn and wheat.

"Energy canes have been touted, both here and internationally, as one of the most efficient future options for producing plant-based fuels, plastics and many sought-after bio-products," Professor Henry said.

“It is becoming well known that sugarcane is a perfect candidate for energy production and a potential replacement to petroleum in a wide range of manufacturing processes.

“To date, the plant’s complex [genetic structure](#), and the investment required to generate its sequences, have hindered research efforts of this nature.”

It is expected that Professor Henry and his team will have completed a “draft” of the sugarcane [genome](#) sequence by mid 2010.

“Thanks to CRC SIIB support, the Australian sugarcane industry will have a fantastic platform from which to conduct all future research into enhanced cane that produce more sucrose and a vast array of environmentally friendly fuel and bio-based products,” he said.

“This will be an outstanding outcome, and the resulting database will include sought after, significant genetic information.”

The sugarcane analysis at SCU is utilising new instruments and facilities funded as national research infrastructure by the Federal Government.

The analysis lets researchers see precisely where in the sugarcane DNA structure specific cane traits can be found, so these traits can be targeted for specific research down the track.

To encourage international collaboration in the area, a CRC SIIB-funded workshop will take place in Cairns next month including representatives from Brazil, France and South Africa.

“By understanding the biological makeup of a plant, we can be more exact in our research and also identify many more sustainable applications for sugarcane,” Professor Henry said.

Provided by University of Queensland ([news](#) : [web](#))

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