Researchers produce world's first transgenic sweet sorghum

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(PhysOrg.com) -- UQ (University of Queensland) researchers are leading green energy technology with confirmation of the world's first transgenic sweet sorghum plants.

Dr Anshu Raghuwanshi, a Research Fellow in UQ's School of Biological Sciences, said sorghum had advantages as a biofuel crop, but until now, tissue culture steps in the gene transfer process had proven difficult, despite international efforts in recent years.

Dr Raghuwanshi leads a research team that developed the gene transfer system for sweet sorghum, within an industry-collaborative R&D program led by UQ's Professor Robert Birch.

"Sweet sorghum is a promising biofuel crop with potential for cultivation on marginal lands due to relatively high drought tolerance, low water requirement, short growing season and easy propagation by seed," Dr Raghuwanshi said.

"The ability to use gene transfer to help produce improved varieties has significant commercial and industrial potential."

Professor Birch said that development of a transformation system opened up new avenues to tailor sweet sorghum varieties for optimum use in green energy, biofuel and biomaterial production.

"I expect it to be a part of the sustainable 'green carbon' economy on a

global scale into the future," Professor Birch said.

The work to develop the gene transfer system was undertaken in collaboration with CSR Sugar.

Sorghum was highly complementary to sugarcane in the expanding global need for renewable biofuel systems, Dr Raghuwanshi said.

The UQ team is now interested in further development with Australian and international sorghum industry participants.

Provided by University of Queensland (news : web)