

Photosynthesis-efficient rice could help meet surging food demand in developing countries

Work is well underway to engineer a rice plant in a way that global production of the grain gets a dramatic boost. The idea is to convert rice into a photosynthesis-efficient plant, which will produce up to 50% higher yields using sunlight.

In an exclusive interview with Dhaka Tribune, Director General of the International Rice Research Institute (IRRI), Dr Matthew Morell, said two Bangladeshi scientists are working at IRRI headquarters in the Philippines on this “C4 Rice Project,” often dubbed a “grand challenge” of the 21st century.

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Rice uses the C3 photosynthetic pathway, which in hot and dry environments, is much less efficient than the C4 pathway, used by some other plants such as maize, sugarcane, and sorghum. Scientists thought that if rice could “switch” to using C4 photosynthesis, productivity would increase by 50%.

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The population of Bangladesh, is projected to reach 202 million by 2050, while the economy is projected to continue to grow at a rate of 7 to 8 per cent per year, said Dr Matthew Morell, adding that: “This robust emerging economy in South Asia will fuel a rise in the demand for rice....”

Read full, original article: [IRRI DG: Work underway for a dramatic rise in rice yield](#)