

## Mahyco, Arcadia Biosciences develop water efficient rice

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Maharashtra Hybrid Seeds (Mahyco), a major seed company in Southeast Asia and Arcadia Biosciences, an agricultural technology company focused on developing technologies and products that benefit the environment and human health, on Feb 13, 2015 announced the achievement of a key milestone in the development of Water Use Efficient (WUE) rice. Arcadia received a significant but undisclosed payment for this milestone from Mahyco.

Arcadia's WUE technology seeks to improve crop yields under episodic water-stress conditions typical to global agriculture, as well as under severe drought conditions. WUE rice developed by Mahyco is expected to be among early examples of crops bred to withstand the varying environmental effects of climate change while expanding the range of usable acreage for crop production.

Mahyco demonstrated that Arcadia's WUE technology significantly increased plant growth under normal and water-stress conditions in multiple rice lines developed by Mahyco. The rice lines incorporating Arcadia's WUE technology showed double-digit increase in key plant performance and yield measures.

Commenting on this development, Dr Usha Zehr, chief technology officer at Mahyco said, "With this milestone, we are closer to bringing the benefits of this technology to the farmers who are challenged with reduced water availability on their farms and improving the overall productivity of the crop."

"At a time when farmers in India face significant pressure to increase productivity, factors such as urban growth, drought and rainfall variations are limiting water resources available for agriculture, particularly for water intensive crops such as rice," said Mr Eric Rey, president and CEO of Arcadia. "Through our collaboration with Mahyco on WUE and other agronomic technologies, we're working to increase yields and improve efficiency in the use of key inputs, such as fresh water." added Mr Rey.

Rice is the world's most valuable crop, grown on 162 million hectares globally with a harvest value of \$334.7 billion in 2012

(FAO 2012 statistics; FAOSTAT). This crop plays a critical role in food security for more than half of the world's population. Based on current growth rates, India is expected to overtake China as the world's most populous nation by the year 2030. The United Nations Food and Agriculture Organization (FAO) estimates that 221 million people in India, or about one-fifth of the population, are undernourished.