

Arcadia Biosciences and Mahyco Seed Company Achieve Key Nitrogen Use Efficient Rice Milestone

July 30, 2013 12:20 PM ET

-- Demonstration of Increased Productivity Offers Promise for Improved Economic Returns for Farmers and Food Security in Southeast Asia --

DAVIS, Calif. and Jalna, INDIA, (July 30, 2013) – Arcadia Biosciences, Inc., an agricultural technology company focused on developing technologies and products that benefit the environment and human health, and Mahyco Seeds, one of the largest seed companies in Southeast Asia, today announced the achievement of a key milestone in the development of Nitrogen Use Efficient (NUE) rice. As outlined in the 2008 agreement between the companies, Arcadia received a significant but undisclosed milestone payment.

In achieving this key milestone, Mahyco clearly demonstrated that NUE technology significantly increased plant growth and yield in multiple rice lines developed by the Company. Rice lines incorporating NUE technology showed double-digit increases in key plant performance and yield measures.

Rice is the world's second-largest crop, grown on 160 million hectares annually. It plays a critical role in food security for more than half of the world's population. India, with a population of more than 1.2 billion, is the second most populous country in the world, and has the world's largest rice growing area, with more than 44 million hectares grown annually.

Based on the current growth rate, India is expected to overtake China in 2030 as the world's most populated country. The United Nations Food and Agriculture Organization (FAO) estimates that 221 million people in India, or about one-fifth of the population, are undernourished. As such, there is significant pressure on Indian farmers to increase agricultural productivity. Beyond NUE rice, Arcadia and Mahyco are also working on a number of other technologies and crops to increase farm productivity and reduce overall environmental impact in the region.

“Mahyco's achievement of this key milestone is further validation of the benefits that can be realized from NUE technology, and is an important step toward improving food security and the environmental footprint of agriculture in Southeast Asia,” said Eric Rey, president and CEO of Arcadia. “Mahyco has been a fantastic partner and is committed to getting improved products into the hands of farmers who can most benefit.”

On this important milestone, Raju Barwale, Managing Director, Mahyco said, “We are delighted to achieve this key milestone in NUE rice. We hope that our collaboration with Arcadia on NUE rice will help farmers achieve better yields and improve their livelihoods. Mahyco is committed to providing cutting-edge modern technologies to the farming community and this milestone marks a significant step in this direction.”

Agriculture is the world's second-largest industrial source of greenhouse gas emissions. Nitrogen fertilizer, applied to increase crop yields, is one of the largest contributing factors. With conventional practices, less than 50 percent of nitrogen fertilizer applied to fields is utilized by crop plants. Much of the remainder enters surface or groundwater, or is volatilized as nitrous oxide, a greenhouse gas 300 times more potent than carbon dioxide. In some Asian countries, rice is among the most nitrogen-intensive crops, with up to 200 kilograms per hectare applied. Globally, rice production accounts for approximately 16 million metric tons of nitrogen fertilizer application, accounting for nearly 16 percent of total world use. Arcadia's NUE technology can significantly reduce the need for nitrogen fertilizer and simultaneously improve food security, enhance farm economics, and minimize greenhouse gas emissions from rice farming.

About Arcadia Biosciences, Inc.

Based in Davis, Calif., Arcadia Biosciences is an agricultural technology company focused on the development of agricultural products that improve the environment and enhance human health. Arcadia's agronomic traits, including NUE, Water Efficiency, Salt Tolerance, Heat Tolerance, and Herbicide Tolerance, are all aimed at making agricultural production more economically efficient and environmentally sound. Arcadia's health technologies and products create healthier nutritional ingredients and foods with lower cost of production. For more information visit www.arcadiabio.com.

About Mahyco Seeds

Established in 1964 by Dr. Badrinarayan R. Barwale, Mahyco is a pioneer and leader in the Indian seed industry. The company strives to provide quality hybrid seeds. Since its inception it has been engaged in plant genetic research and production of quality hybrid seeds for the farming community of India. Currently, it is engaged in the research, production, processing and marketing of approximately 115 products in 30 crop species including cereals, oilseeds, fiber and vegetables. Mahyco is also developing genetically enhanced crops with the use of gene transfer technology. Mahyco has a national presence with its network across the country. For more information visit www.mahyco.com.