

Arcadia Biosciences Receives \$3.6 Million USAID Grant to Develop Improved Crops in India

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Nitrogen Use Efficient, Salt-Tolerant and Water Efficient Crops Can Improve Food Security, Farm Income and the Environment in India

DAVIS, Calif. (December 2, 2008) –Arcadia Biosciences, Inc., an agricultural technology company focused on developing technologies and products that benefit the environment and human health, today announced that it received a grant from the United States Agency for International Development (USAID) for the development of Nitrogen Use Efficient (NUE), Salt-Tolerant and Water Efficient (WE) rice and wheat in India. Under terms outlined in the grant, Arcadia receives a total of \$3.6 million over the next three years. Arcadia will work with its partner in India, Maharashtra Hybrid Seeds Company Ltd. (MAHYCO), on product development and implementation for the program.

In April 2008, Arcadia entered into a multi-crop, multi-technology agreement with MAHYCO to develop and commercialize improved crops in India and South Asia. The USAID grant will expand and expedite those activities to more rapidly develop desperately needed new agricultural varieties for the region. Between rapid population growth and challenging climatic conditions, Indian farmers are in a constant struggle to feed the country's people. The United Nations Food and Agriculture Organization (FAO) estimates that 221 million people in India, or about one-fifth of the population, are undernourished. New agricultural technologies like those outlined in the USAID grant can provide a significant boost to agricultural productivity without the need for additional equipment or major changes in farming practice.

In addition to productivity challenges, current farming practices in India put a strain on freshwater resources and on the environment. Scarce freshwater resources that could be used for drinking are used to irrigate crops. Water Efficient crops under development by Arcadia can reduce the total amount of water used. Salt-Tolerant plants can further relieve the demands of irrigation on fresh water resources. Nitrogen Use Efficient crops enable achievement of high yields with up to a 50 percent reduction in required nitrogen fertilizer, thereby reducing fertilizer costs to farmers and reducing the environmental impacts of fertilizer application. Crops generally absorb less than 50 percent of nitrogen fertilizer applied to agricultural fields, and the un-absorbed portion may pollute waterways or be emitted as nitrous oxide, a greenhouse gas that is 300 times as damaging as carbon dioxide.

"Increasing the productivity and sustainability of rice and wheat systems in South Asia is critical for the low-income producers and consumers across the region and a high priority for USAID. South Asia is home to almost 1.5 billion people, including more than 30 percent of the world's malnourished people. As essentially all of the arable land is already under cultivation, meeting future cereal demand and enabling agricultural diversification will require higher rates of improvement in cereal yields. Declining agricultural productivity in the face of climate change and competition for limited water resources in South Asia would have far reaching consequences. The importance of addressing the long-term challenges facing agriculture and natural resource management in the region cannot be overstated. With more than 70 percent of the population living in rural areas, sustaining increases in agricultural productivity and efficient use of land, energy and water resources will have a large impact on livelihoods of the poor," said Robert Bertram, Acting Director of the Office of Environment and Science Policy of USAID.

"Abiotic stresses such as drought, salinity, heat or soil nutrient deficiencies are a constraint to rice and wheat production in South Asia. Under most projected climate change scenarios for South Asia, heat stress and water availability will emerge as major constraints, with floods and drought both increasing in frequency and severity," said Josette Lewis, Director of the Office of Agriculture of USAID. "The introduction of crops with enhanced tolerance to abiotic stresses will be an important strategy to increase agricultural productivity, and hence, farmer livelihoods and regional food security under these anticipated impacts of climate change. Arcadia is the ideal recipient of this grant because of the value of their technology portfolio and scientific expertise, and because of their relationship with MAHYCO and their proven success in the local region."

"India is one of the most strategically important regions in the world in terms of providing food security in a way that has a minimal impact on the environment. There is a very real need to maximize agricultural productivity, but many conventional technologies require changes in farm practice and can have a negative impact on the environment. The programs outlined in the USAID grant offer a positive alternative and partial solution," said Eric Rey, president and CEO of Arcadia. "Our partnership with USAID and MAHYCO is a great example of public and private organizations working together to make a measurable impact."

"This USAID grant further demonstrates the strength of our partnership with Arcadia and our commitment to bringing modern, powerful technologies to both large and small Indian farmers," said Usha Zehr of MAHYCO. "Indian farmers need new technologies to help feed the country's growing population, and this grant will help expedite this process."

About Arcadia Biosciences, Inc.

Based in Davis, Calif., with additional facilities in Seattle, Wash. and Phoenix, Ariz., Arcadia Biosciences is an agricultural biotechnology company focused on the development of agricultural products that improve the environment and enhance human health. For more information, visit www.arcadiabio.com

About USAID

The U.S. Agency for International Development administers the U.S. foreign assistance program providing economic and humanitarian assistance in more than 120 countries worldwide. For more information visit www.usaid.gov.

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.