

## **Arcadia Receives \$4.5 Million Grant from USAID to Develop Salt-Tolerant Rice and Gather Greenhouse Gas Emissions Data from Nitrogen Efficient Crops**

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### **-New Grant Builds Upon Achievements From 2008 USAID Grant To Develop Improved Crops in Bangladesh and Indonesia-**

**DAVIS, Calif. (January 31, 2012)** - Arcadia Biosciences, Inc., an agricultural technology company focused on developing technologies and products that benefit the environment and human health, today announced that it has been awarded a 5-year, \$4.5 million grant from the U.S. Agency for International Development (USAID) to develop salt-tolerant rice and measure greenhouse gas emissions from conventional rice fields in Bangladesh and Nitrogen Use Efficient (NUE) crops in Indonesia. Arcadia's activities will contribute to Feed the Future, the U.S. government's global hunger and food security initiative.

It's estimated that between \$15 billion and \$20 billion in global crop yields are lost annually due to the effects of salt-impacted soil and water. In Bangladesh, salinity reduces crop productivity on an estimated 1 million hectares along the country's coastal areas, where salt-water intrusion is an ever-present and growing problem. An estimated 53 percent of the coastal areas are affected by salinity. Average rice yields in salt-impacted areas of Bangladesh are estimated at between 2.5 and 3 tons per hectare, compared to 4 tons per hectare in more favorable soils. Rice is central to Bangladesh's economy and agriculture, accounting for nearly 18 percent of its Gross Domestic Product (GDP) and providing about 70 percent of an average citizen's total calories. Rice growing areas total about 10 million hectares and account for 75 percent of the country's total agricultural land, and 93 percent of its cereal crop hectares. The rice sector is by far the most important provider of rural employment. Development of salt-tolerant rice varieties for the region can have a significant impact on the country's economy and food security.

As part of the grant, Arcadia will also conduct NUE Rice field trials and measure greenhouse gas emissions in Indonesia and will gather baseline greenhouse gas emission measurements from conventional rice fields in Bangladesh.

Globally, agriculture is the second-leading industrial source of greenhouse gas emissions – accounting for more emissions than the transportation sector. The use of nitrogen fertilizer is a key driver of agricultural emissions. Arcadia's NUE technology, which enables crops to produce high yields using significantly less fertilizer, can have a major positive impact on the reduction of greenhouse gas emissions. The company and its technology licensees have demonstrated in more than 20 field trials in five crops and multiple growing regions that NUE technology can significantly reduce fertilizer use while maintaining high yield levels. The greenhouse gas measurement work that will be done through the USAID grant will help refine methodologies that could allow farmers to gain carbon credits from reduced fertilizer use.

In addition to on-the-ground work in Bangladesh and Indonesia, Arcadia will work alongside researchers from those countries in the company's Davis, Calif. research facilities and various field trials.

“USAID projects have had a measurable impact in the development of crops that improve food security in developing countries. Under this latest grant, our work in rice will further the USAID mission and can help growers in Bangladesh produce more food on the same amount of land,” said Eric Rey, president and CEO of Arcadia. “Our efforts in Indonesia can help reduce global dependence on nitrogen fertilizer, making growers more productive using fewer resources and with a lower carbon footprint. We anticipate that farmers in developing and developed countries will be increasingly able to earn credits for reduced carbon emissions and simultaneously improve farm economics and the environment.”

“We are facing the huge global challenge of feeding a world population that is expected to increase by one-third by the year 2050,” said Dr. Julie Howard, USAID's Chief Scientist in the Bureau for Food Security and Senior Advisor to the Administrator on Agricultural Research, Extension and Education. “That means finding innovative ways to increase crop production on less land in an unpredictable climate. USAID is proud to work with partners like Arcadia and agricultural

scientists in developing countries as we strive, together, to contribute to the growth and resilience of the food supply of tomorrow.”

**About Arcadia Biosciences, Inc.**

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

**About USAID**

The U.S. Agency for International Development (USAID) is an independent agency that provides economic, development and humanitarian assistance around the world in support of the foreign policy goals of the United States. As stated in the President’s National Security Strategy, USAID’s work in development joins diplomacy and defense as one of three key pieces of the nation’s foreign policy apparatus. USAID promotes peace and stability by fostering economic growth, protecting human health, providing emergency humanitarian assistance, and enhancing democracy in developing countries. These efforts to improve the lives of millions of people worldwide represent U.S. values and advance U.S. interests for peace and prosperity. [www.usaid.gov](http://www.usaid.gov)

**About Feed the Future**

Feed the Future is the United States Government's global hunger and food security initiative. It supports country-driven approaches to address the root causes of hunger and poverty and forge long-term solutions to chronic food insecurity and undernutrition. Drawing upon resources and expertise of agencies across the U.S. Government, this Presidential Initiative is helping countries transform their own agriculture sectors to grow enough food sustainably to feed their people. [www.feedthefuture.gov](http://www.feedthefuture.gov)