

Arcadia Biosciences Receives Chinese Patent for Key Nitrogen Use Efficiency Technology

May 2, 2012 8:25 PM ET

--Company Achieves Key Step Toward Chinese Commercialization of Technology to Enhance Food Security, Reduce Greenhouse Gas Emissions and Increase Productivity--

DAVIS, Calif. (May 2, 2012) -- Arcadia Biosciences, Inc., an agricultural technology company focused on developing technologies and products that benefit the environment and human health, today announced that the company has been granted a key patent for its Nitrogen Use Efficiency (NUE) technology from the State Intellectual Property Office of China. Issuance of this patent is an important step in the company's efforts to offer Chinese farmers an opportunity to improve on-farm economics, reduce greenhouse gas emissions, and enhance food security in the country.

Nitrogen fertilizer is one of the most important and costly inputs in modern agriculture. Since most crops are inherently inefficient in their use of nitrogen, approximately one-half of the fertilizer farmers apply is not used by the plant and either volatilizes into nitrous oxide, a greenhouse gas 300 times more potent than carbon dioxide, or enters ground and surface water systems. Arcadia's NUE technology enables farmers to use significantly less nitrogen fertilizer on their crops and still maintain high yields. The technology has been demonstrated in field trials in numerous crops, including primary Chinese edible grains, such as rice and wheat.

The issuance of Arcadia's Chinese patent comes just weeks after the company announced the submission of a draft carbon credit methodology to the Clean Development Mechanism (CDM) of the United Nations Framework Convention on Climate Change. The methodology would allow farmers to claim carbon credits from reduced fertilizer use in conjunction with Arcadia's NUE technology. The company developed the methodology in response to the need for low-carbon practices in agriculture, which is the second-largest industrial source of greenhouse gas emissions. Once approved, the methodology will offer another potential revenue stream to growers in addition to cost savings created by reduced use of nitrogen fertilizer.

"The rapid industrialization, urbanization, and population growth in China is creating a very real need for increased food production in the region. Current pressure on growers to meet the country's food needs creates an opportunity for new agricultural technologies to improve productivity and achieve low-carbon agriculture," said Eric Rey, president and CEO of Arcadia. "The availability of our NUE technology in China will offer growers a new technology option that can maintain high yields and provide multiple revenue streams, all while benefitting the environment."

With a population of nearly 1.35 billion, China is the world's most populated country. While population growth has slowed over recent years, the economy has grown significantly, creating increased demand on food supplies associated with an expanding middle class. In addition, China is expected to see the world's second-largest increase in urban population over the next four decades, measurably increasing the country's carbon footprint. Even with its moderating population growth, the country's consumption needs are staggering and continue to escalate. Since 1995, agricultural acres have increased from 135 million hectares to 155 million hectares. The country's three primary crops – corn, rice, and wheat – total more than 85 million hectares alone. With the increasing pressure on China's food supply and the need to get higher yield per hectare, the country has increased nitrogen fertilizer use per hectare from 265 kilograms to 315 kilograms during the same 1995 to 2011 time period.

"Socioeconomic trends in China will continue to put pressure on the country's food security and are expected to significantly increase output of greenhouse gas emissions," said Rey. "The issuance of our patent for NUE technology is a critical part of our commercialization strategy that leverages the value of the technology itself, our carbon credit methodology, and the evolving intellectual property environment in China."

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.