

Technology to Battle "Dead Zones" Closer to Reality

September 21, 2006 10:00 PM ET

-- New Field Data Supports Development of More Nitrogen Efficient Crops That Promise to Benefit Farmers and the Environment --

DAVIS, Calif. (September 21, 2006) – The end of summer marks the peak of "dead zone" season when vast swathes of coastal ocean waters become oxygen-starved and uninhabitable by marine life. Much of this problem is due to the presence of excess nutrients, primarily nitrogen, from agricultural fertilizer and industrial runoff. Bringing a sustainable solution to the dead zone problem, Arcadia Biosciences today announced that it has completed multiple field trials demonstrating Nitrogen Use Efficient (NUE) crops that achieve high yields and require 50% less nitrogen fertilizer than conventional crops.

According to the United Nations Environment Program, dead zones are one of the world's top environmental threats. The growth of dead zones in late spring is often accelerated by nitrogen fertilizer runoff, which promotes runaway algae growth in rivers and coastal waters. At the end of the growth cycle, decomposition of the dead algae depletes oxygen from the water, making it virtually uninhabitable by marine life. There are 146 dead zones worldwide, and more than 20 in the U.S. Each year a dead zone estimated at 8,000 square miles forms where the Mississippi River enters The Gulf of Mexico. In the Chesapeake Bay, the largest U.S. estuary, 40 percent of the principal waterway was recently classified as a dead zone. In an effort to reduce the nitrogen pollution that causes dead zones, state legislatures bordering the Chesapeake Bay have requested millions of dollars from State and Federal governments to fund conservation programs aimed at reduced use of nitrogen fertilizer.

Nitrogen fertilizer use has historically increased, and is expected to continue to do so, as agricultural production responds to rising world demand for food and energy.

Arcadia Biosciences' NUE technology allows crops to use nitrogen fertilizer much more efficiently. Arcadia announced the demonstration of NUE technology in canola plants through a series of eight field trials performed over five growing seasons in three different areas. In all field trials the NUE canola plants produced high yields with more than a 50% reduction in nitrogen fertilizer application. Considering the increasing cost of nitrogen fertilizer, which is tied to the rising cost of natural gas, NUE technology gives farmers an economic incentive to reduce nitrogen fertilizer use. Reduction in fertilizer use can have a major positive impact on water quality, greenhouse gas emissions, and the amount of total energy used in agricultural production. The company is working on demonstrating NUE technology in other key crops such as corn, rice, and wheat, and has additional field trials underway.

"In contrast to subsidized conservation programs, NUE technology offers a sustainable way for farmers to reduce nitrogen inputs because it provides an economic incentive to use less fertilizer," said Eric Rey, president and CEO of Arcadia. "We've demonstrated the technology in multiple key agricultural crops and think that it offers a 'win-win' opportunity for farmers and the environment."

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.