Lunch~N~Learn SEMINAR

THE NATIONAL COALITION FOR FOOD & AGRICULTURAL RESEARCH

CLIMATE SMART PRECISION AGRICULTURE

March 7, 2016
PROGRAM

Welcome and Introduction

DR. BETHANY JOHNS
NATIONAL C-FAR REPRESENTATIVE

Distinguished Speaker

DR. RAJ KHOSLA
MONFORT PROFESSOR OF PRECISION AGRICULTURE
COLORADO STATE UNIVERSITY

Open Forum

Closing

DR. BETHANY JOHNS

NATIONAL C-FAR IS a nonprofit, nonpartisan, consensus-based and customer-led coalition that brings food, agriculture, nutrition, conservation and natural resource stakeholders together with the food and agriculture research and extension community, serving as a forum and a unified voice in support of sustaining and increasing public investment at the national level in food and agricultural research, extension, and education. For additional information, go to www.ncfar.org; or contact Tom Van Arsdall, Executive Director, at tom@vanarsdall.com.
ABSTRACT
Nitrogen fertilizer is the most widely used nutrient on the planet and the most important contributor of nitrous oxide emissions from agricultural sources. With increasing pressure to produce more food globally, many economies have been increasing nitrogen consumption. The global nitrogen use efficiency estimates are in the proximity of 40%, which indicates that a lion’s share of nitrogen applied to crops is lost in the biosphere every year. The 5-R nutrient stewardship is a major breakthrough in addressing the nitrogen challenge. It optimizes the input source, placement, amount, timing, and manner while maximizing output, efficiency, and profitability in a sustainable manner. Long-term research at Colorado State University since 1997 has developed and demonstrated site-specific management zones as an effective tool for climate smart agriculture. This research documented a reduction of up to 46% in nitrogen loadings without impairing grain yields. Coupling site-specific management zones with more recent innovations such as active proximal sensors enables the management of both, macro- and micro-variability in farm-fields and results in further improvement of nitrogen use efficiency and reductions in N loadings in the biosphere. Recent studies conducted under small scale farming systems in China, India, Malaysia, Zimbabwe, Mali, Niger and elsewhere have demonstrated that the benefits of such 5-R nutrient management techniques are scale independent.

SPEAKER BIOGRAPHY
Raj Khosla, Ph.D., is Colorado State University (CSU) Distinguished Monfort Professor of Precision Agriculture. He is also Assistant Dean of international Programs with the College of Agricultural Sciences. In 2012, Dr. Khosla was named the Jefferson Science Fellow by the National Academy of Sciences and was appointed as the Senior Science Advisor to the U.S. Department of State. Dr. Khosla’s main focus of research has been “Management of in-field soil and crop spatial variability using innovative technologies (such as GPS, GIS, and Remote-sensing) for precision management of crop inputs across large and small scale farming systems. He currently has projects in multiple countries and is championing efforts to enhance crop input use efficiency, productivity, profitability, and sustainability of large and small scale agricultural production systems. Dr. Khosla is the Founder and Founding-President of the International Society of Precision Agriculture.
SEMINAR SERIES DESCRIPTION

National C-FAR’s Seminar Series regularly presents leading-edge researchers to address pressing issues confronting the public and Congress. National C-FAR and the Seminar Series serve as a resource to policymakers and staff.

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