

Program 9R-2

► Rice Irrigation Management As Potential Entry Point To Carbon-Offset Markets

Presented by Dr. Joseph Massey

Research Scientist, Progressive Farm Services

Governments and companies are seeking ways to reduce greenhouse gas (GHG) emissions, especially carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) gases. Some reductions are mandatory, such as those required of electrical power generators as part of California's Cap-and-Trade program. Others are voluntary, as when Delta Airlines purchases "carbon offsets" that pay to help protect rainforests and/or plant trees as a means to "offset" greenhouse gases emitted by their aircraft and operations. Other companies may seek to reduce their carbon footprints, for example, by growing, harvesting and finishing wood products using low-carbon practices. There is potential for rice growers in the Mid-South to participate in all

three levels of the GHG emissions reduction market. Carbon offsets used as part of California's Cap-and-Trade program require extensive documentation and verification by a third (outside) party. Voluntary offsets have less strict requirements while "green" products have the lowest requirements. The higher its quality of documentation and verification, the more an offset is worth. Organizations such as the American Carbon Registry exist to ensure that GHG emission reductions are real and not claimed by more than one entity at a time.

Although details and procedures remain to be sorted out, early-adopter/innovator-type growers are already investigating ways that they might participate in Mid-South rice GHG markets to generate additional revenue that might help offset rising input costs. Rice production practices that reduce GHG emissions include Early Flood Termination, Multiple-Inlet Rice Irrigation, Alternating Wet-Dry (aka Intermittent Flooding), Power Plant Efficiency Optimization, Reduced Nitrogen Application, and Straw Removal.

This presentation will provide an overview of the voluntary Mid-South rice GHG emissions market with an emphasis on rice irrigation management as a foundation to reducing production costs and GHG emissions while improving irrigation efficiency as a means to protect vital water resources.