

# Agricultural Research Service Update

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# Climate Change, Soils & Emissions

- Enable Improvements of Air Quality via Management and Mitigation of Emissions from Agricultural Operations
- Develop Knowledge and Technologies for Reducing Atmospheric Greenhouse Gas Concentrations Through Management of Agricultural Emissions and Carbon Sequestration

# 5 Year Research Cycle....

- Air Quality and Climate Change Project Plans
  - 10/2009
- ARS-Office of Scientific Quality Review (OSQR)
  - 11/2009 – 2/2010 panels
  - Completed by 4/2010
- GRACEnet Cross-Location Research project
  - 9/2011 completion
  - Some elements moving to next steps now



# Air Quality Research

- ARS-HQ funded Post Doctoral Associate
  - Candidate with desired expertise recruited
  - Modeling & measurements background
  - ARS scientists: “landmark data sets” objective
  - Computer resources preparation
- ARS PM researcher moving to University position
  - Research to continue



# Air Quality Research

- American Chemical Society
  - Washington DC, August 18-19, 2009
  - 2-Day Agricultural Air Quality Sessions
  - 4 Oral presentation sessions, posters, research directions discussions
  - Invited + submitted presentations
  - US & International scientists
  - ARS-ONP opening presentation



# Air Quality Research

- ARS Air Quality Researchers Working Group
  - “Cross-Program”
  - August 18, 2009 – after ACS sessions
    - ~15 scientists present, ~5 via phone, ~3 “regrets”
- Brain-storming:
  - Collaborative research: ARS & others
    - Field campaigns
  - Sharing instrumentation, expertise
  - Standardize methods
  - Tech transfer & outreach



# Data Base Management System

- ARS-wide Natural Resources research
- Building blocks
  - CEAP-STEWARDS
  - GRACEnet
  - REAP
- Air Quality
- “IT Approach”
  - Greg Wilson, ARS-OIT
  - Scientists, stakeholders, collaborators\* input



# Climate Change GHG Research

- GRACEnet
  - 31+ locations.....
  - 145 publications since 2006 as of 8/2009
  - Data base FY'10
  - Integration & Synthesis FY'11
  - International interest in collaborations
  - Expanding to animal systems
    - Basic “scenarios”, standardized methods, data base, synthesis
  - 11/2009 scientist meeting



# Climate Change GHG Research

- GRACEnet – Greenhouse gas Reduction through Agricultural Carbon Enhancement network
  - ARS base-funding
- CASMGS – Consortium for Agricultural Soils Mitigation of GHG
  - CSREES funding
- Visit with Dr. Chuck Rice, KSU



# GRACEnet & CASMGS.....

- Collaborations
  - Synthesis & integration
  - Science communication/tech transfer
    - Scientific
    - Producers
    - Policy-makers
  - Conference sessions, workshops, publications
  - Data Base??
  - New research

# Future

- ARS Research projects OSQR reviews
- ARS-AQRWG organizational development
- ARS Natural Resources Data Management System
- GRACEnet “for cows”, international collaborations
- GRACEnet – CASMGS collaborations
- ARS Agricultural Research Magazine
  - Climate Change research special issue 12/09



# Thank you

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