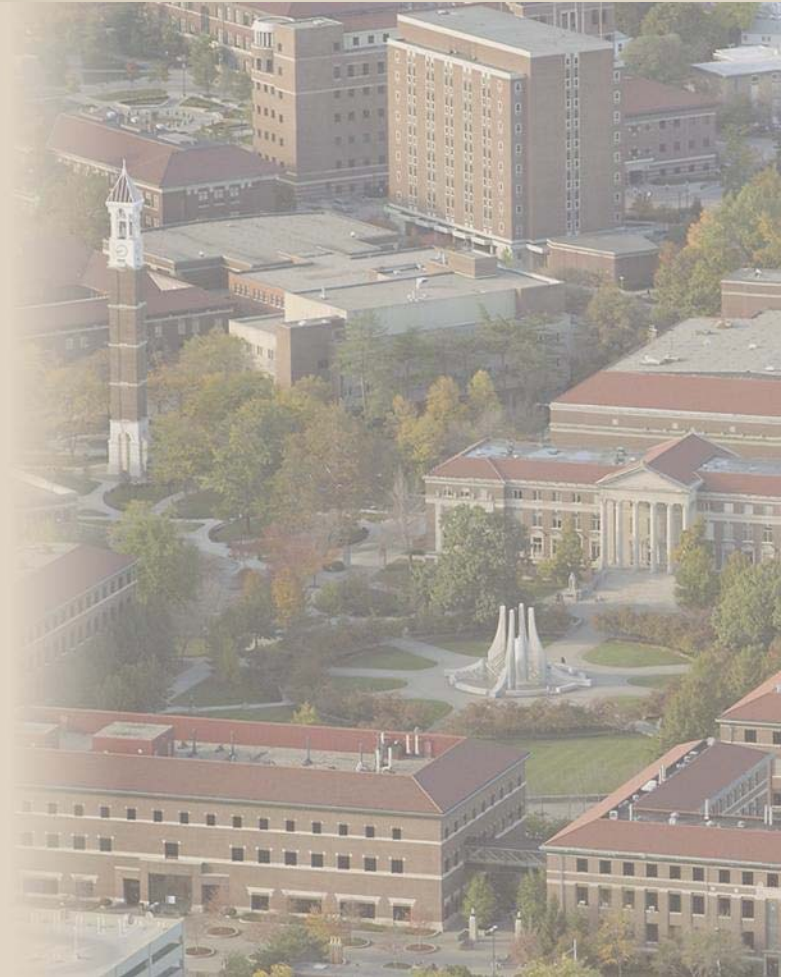


# **My Vision as Head of K-State's Grain Science & Industry Department**

**Dirk E. Maier, Ph.D., P.E**

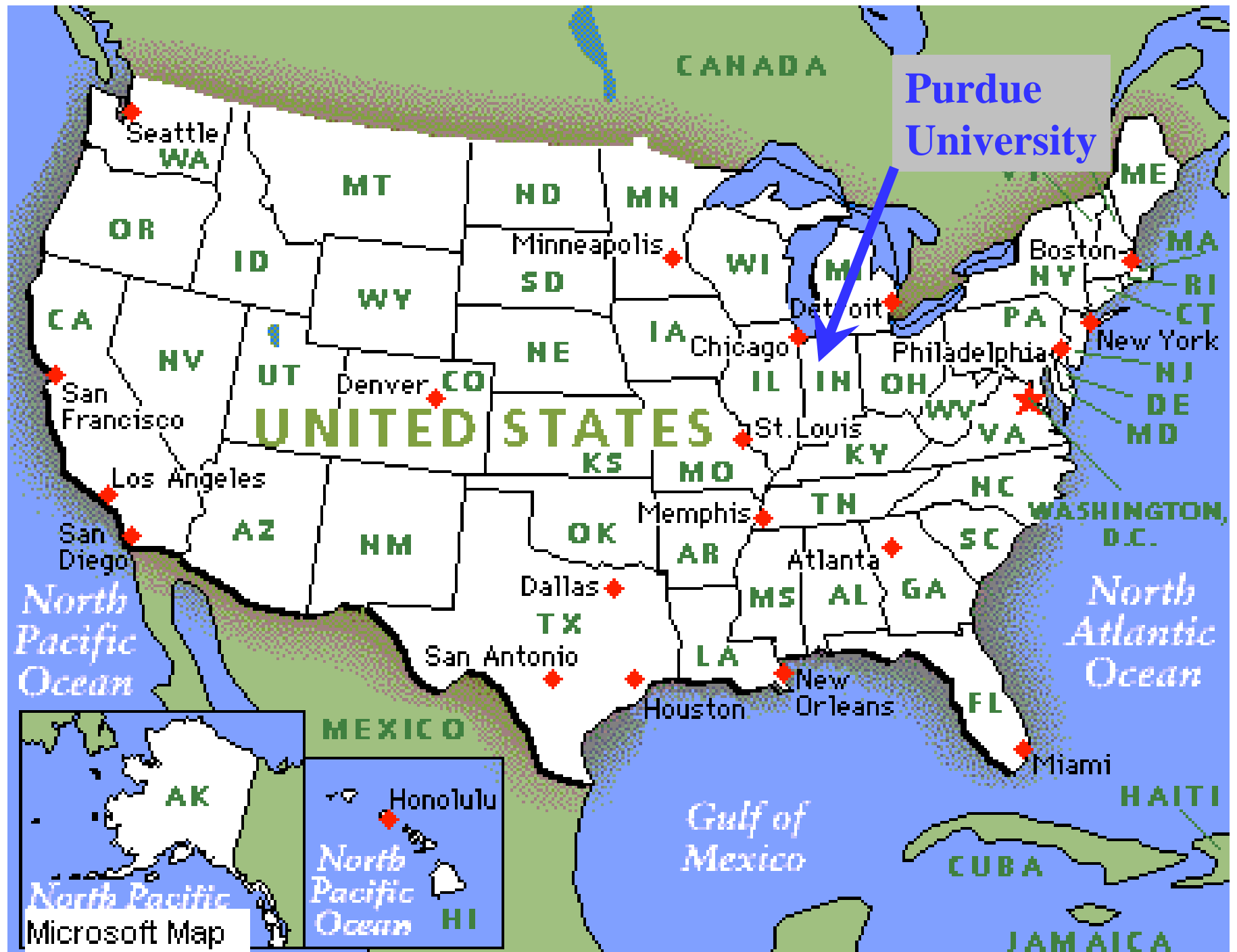
**Professor, Associate Head & Extension  
Engineer**

**Dept of Agricultural & Biological Engineering  
Purdue University**



# Outline

- Brief biographical sketch
- Administrative philosophy
- A vision for K-State's Grain Science & Industry Department



# Summary of Qualifications

- Faculty member in Purdue University's Ag & Bio Engineering Dept since 1991
  - Research, extension and teaching
- Associate Department Head
  - Graduate Program Coordinator
  - Research Program Coordinator
- Founding Director of Purdue's ...
  - Grain Composition Analysis Service
  - Post-Harvest Education & Research Center

# PHERC Pilot Bin Facility



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Post-Harvest Education and Research Center, Purdue University

# Summary of Qualifications

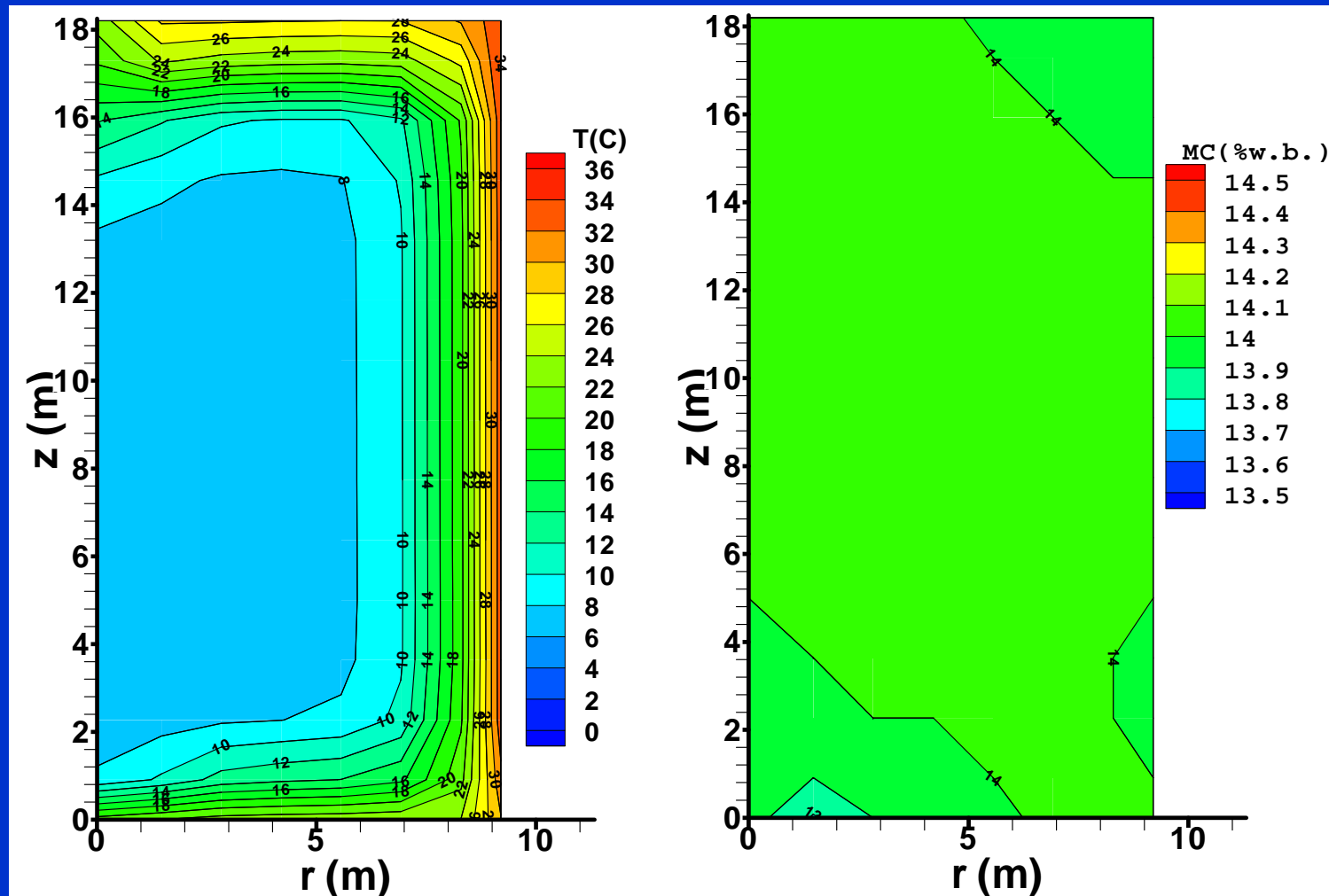
- Significant Research & Technology Transfer Experience
  - Grain quality assessment & preservation
  - Stored product protection
  - Adoption of best management practices
  - Commercialization of several technologies
- Extensive national & international experience
  - Latin America, Southeast Asia, China, Europe, Australia

# Technologies and Practices

- Preventive Tools
  - Practices
    - Best Management Practices (SLAM)
  - Technologies
    - Grain drying
    - Heat treatment
    - Grain chilling
    - Physical exclusion
    - Insect monitoring
    - Early spoilage detection

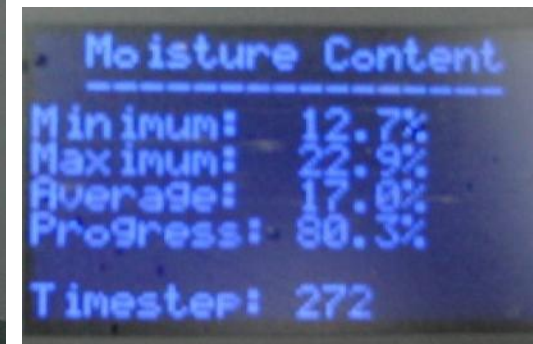


# *135,000 bu Bin of Corn during Summer Storage in Indiana – Non-aerated on 7/28/89*





# Equilibrium Moisture Content Controller





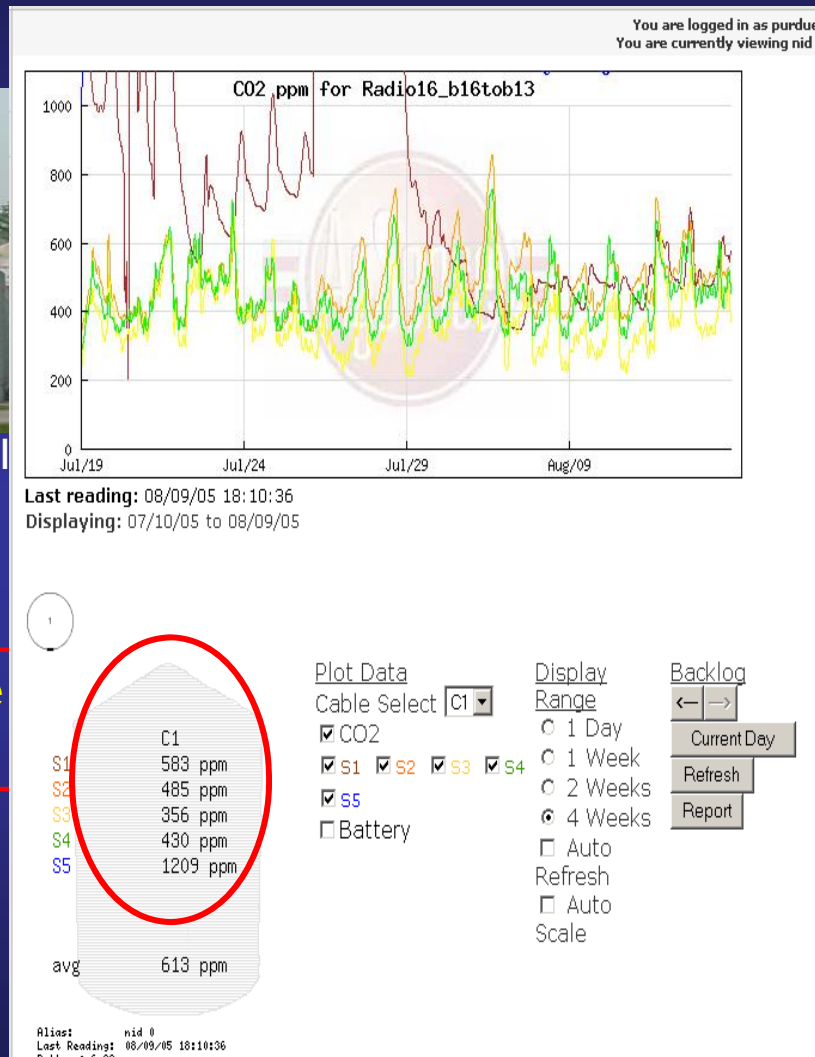
**Grain Chiller AAG GTC 3500**

# Real-time Remote Monitoring of CO<sub>2</sub> Levels for Early Grain Spoilage Detection

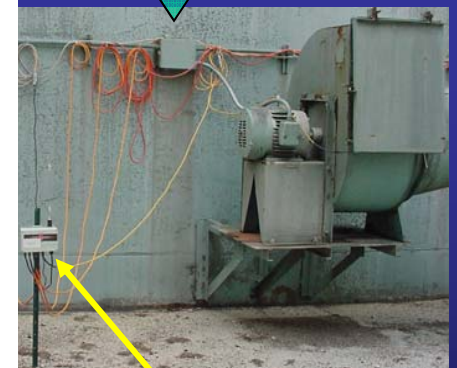


The Andersons, Delphi, IN

## Early Grain Spoilage Warning System



vent with CO2 sensor



Slave radio

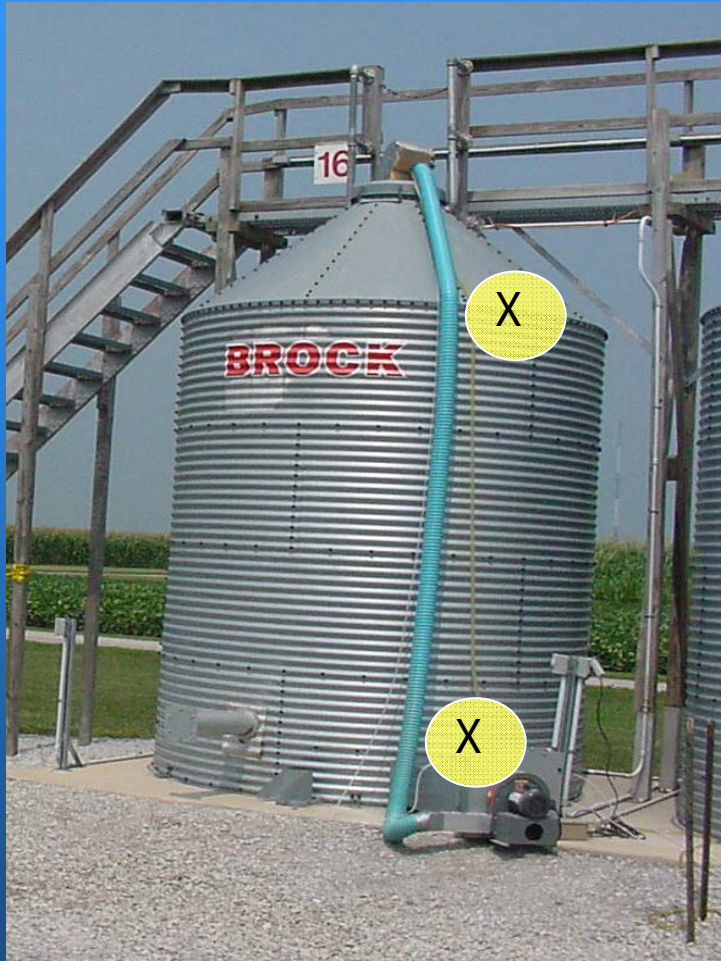
# Technologies and Practices

- Control Tools
  - Practices
    - Best Management Practices
      - Insect identification & control selection
  - Technologies
    - Protectants (Spinosad)
    - Ozonation
    - Biological control
    - Biomodified & controlled atmospheres
    - Fumigation (structural)





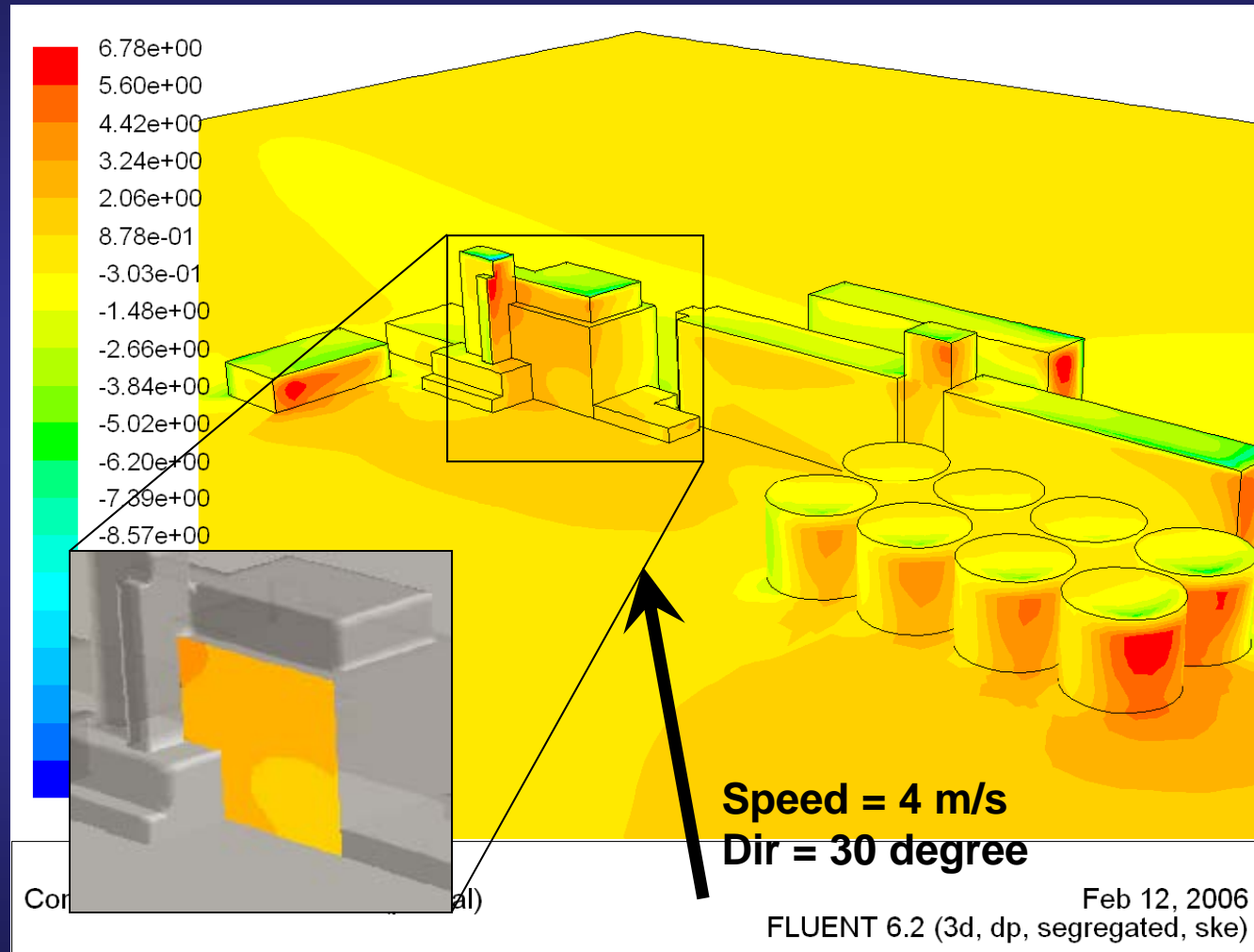
# Ozonation Process



Corona discharge

**Ozonation treatment with recirculation and sampling points (X) at the top and bottom of the grain mass.**

# Wind Induced Pressure Profile – 1 million ft<sup>3</sup> 6-floor wheat flour mill under SF fumigation



# Summary of Qualifications

- Close cooperation with grain industry
  - Grain producers, handlers, processors
  - Equipment and service suppliers
  - Producer and industry associations
- Close cooperation with colleagues
  - Purdue Grain Quality Team
    - Engineering, entomology, economics, plant pathology
  - Consortium for Integrated Management of Stored Product Insect Pests
    - Purdue, OK State, K-State, USDA-ARS GMPRC

# Purdue Colleagues



**Dr. Linda J. Mason**  
*Entomology*



**Dr. Klein E. Ileleji**  
*Ag & Bio Engineering*



**Dr. Corinne Alexander**  
*Ag Economics*



**Dr. Charles Woloshuk**  
*Botany & Plant Pathology*



**Dr. Richard L. Stroshine**  
*Ag & Bio Engineering*

**Dr. Dale Moog**  
*Ag & Bio Engineering*

**Dr. Raj Hulasare**  
*Ag & Bio Engineering*  
*(formerly)*



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Post-Harvest Education and Research Center, Purdue University



# CIMSPIP Colleagues



**Dr. Bh. Subramanyam**  
*Grain Science*  
*Kansas State University*



**Dr. Frank Arthur**  
*Biological Research Unit*  
*USDA-ARS-GMPRC*



**Dr. Ron Noyes**  
*Ag & Bio Engineering*  
*Oklahoma State University*



**Dr. Tom Phillips**  
*Entomology*  
*Kansas State University*



**Dr. Gerrit Cuperus**  
*Entomology & Plant Pathology*  
*Oklahoma State University*



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Post-Harvest Education and Research Center, Purdue University

# Summary of Qualifications

- Numerous leadership experiences
  - NC-213 Executive Committee Member
  - International Quality Grains Conference Organizer
  - International Working Conference on Stored Product Protection Permanent Committee Member
  - GEAPS-Purdue Distance Education Program Director
    - APOSGRAN-GEAPS-Purdue Distance Education Program Co-Director
- Formal leadership training
  - Land Grant University College of Agriculture
    - ESCOP/ACOP Fellow Class 14
    - New Administrators Workshop

# Summary of Qualifications

- Recognition of Impact
  - Purdue College of Agriculture Dean's Team Award
  - PUCESA Junior, Senior & Team Awards
  - ASABE Young Extension Worker Award
  - Andersons Excellence in Grain Quality Research Award
  - Purdue University Agricultural Research Award
  - University Faculty Scholar
- Impact on Next Generation
  - Completed: 15 M.S., 5 Ph.D., 8 post-docs
  - Current: 3 M.S. (incl 1 NSF Fellow), 3 Ph.D., 2 post-docs

# Students & Staff





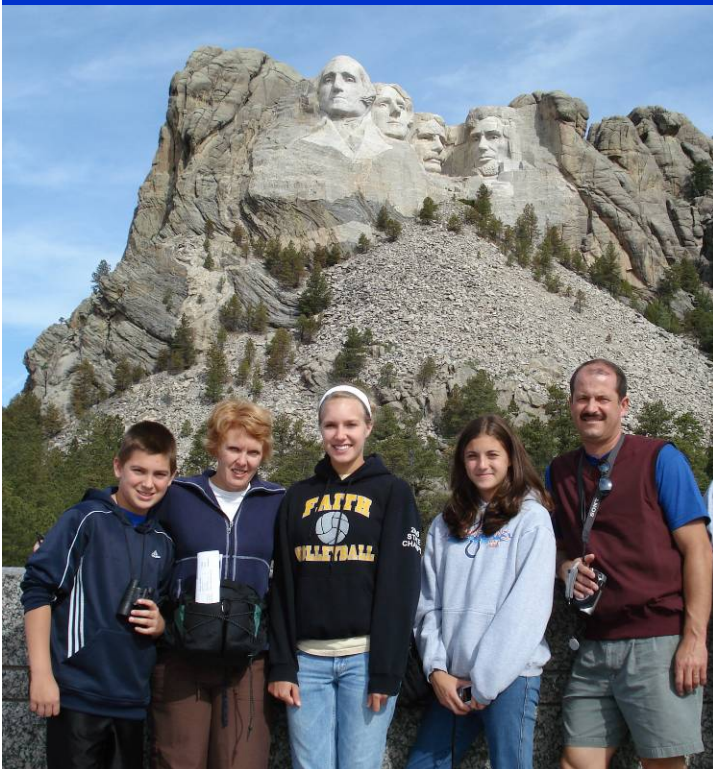
# *Ride Across Indiana*

*160 miles (257 km)*

*One way (IL to OH)*

*One day (July 16)*

*9 h 13 min*



# Outline

- Brief biographical sketch
- Administrative philosophy
- A vision for K-State's Grain Science & Industry Department





# Administrative Philosophy

- Success of K-State's GS&I Department depends on *all* of our successes
  - “Team GS&I”
- My guiding principles are to ...
  - serve others and lead by example
- My leadership qualities...
  - Character/integrity
  - Communication
  - Competence
  - Focus
  - Initiative
  - Listening
  - Responsible
  - Positive attitude
  - Problem solving
  - Servanthood
  - Self-discipline
  - Transparent/open



# Responsibilities of the Department Head

- Leadership
- Management
- Advocacy
- Mentorship





# *Experienced Mentor*

*“Success is peace of mind, which is a direct result of self-satisfaction in knowing you did your best to become the best that you are capable of becoming.”* – John Wooden

- KSU GS&I is successful when *our* people are successful
    - Help individuals achieve to their potential
    - Professional development, promotion, awards
  - Committed to inclusion and diversity among faculty, students and staff
    - Recruitment & retention
- ➔ Extensive *experience* mentoring faculty, staff and undergraduate & graduate students



# *Effective* Advocate for GS&I

*“Good is the enemy of great... Greatness is largely a matter of choice.”* – Jim Collins

- Important to visibility and recognition
  - K-State, GMPRC, AIB
  - Partners, Stakeholders
  - Community, State, Region
  - National, International
- ➔ Experience as an *effective* advocate for my programs and institution



# *Effective Manager*

*“Management is the effective use and coordination of already allocated resources to achieve predefined objectives.”* - Don Chu

- Make sure things work day-to-day
  - Listen and communicate
  - Build consensus and make decisions as required
  - Empower others and support them
    - Stewardship delegation
- ➔ Experience as an *effective* manager of people and programs



# *Authentic Leader*

*“Authentic leadership is the ability to bring people together around a shared purpose and a common set of values and motivate them to create value for everyone involved and to achieve sustainable results over time.”* - Bill George

- Clear vision for the future
  - Building a *great* organization
- Visible values, high expectations
- Strategic planning to realize vision
  - Q2 Activities (important, not urgent)

➔ Experience as an *authentic* leader of people and programs



# Outline

- Brief biographical sketch
- Administrative philosophy
- A vision for K-State's Grain Science & Industry Department



## The Vision Thing...

*"Even if you are on the right track,  
you'll get run over if you just sit  
there."* - Will Rogers

*"Without vision people perish."*  
- Solomon



## Vision of K-State GS&I

*“To be the center of excellence in research, education, and technology for all aspects of grain handling, storage, quality, processing and utilization.”*



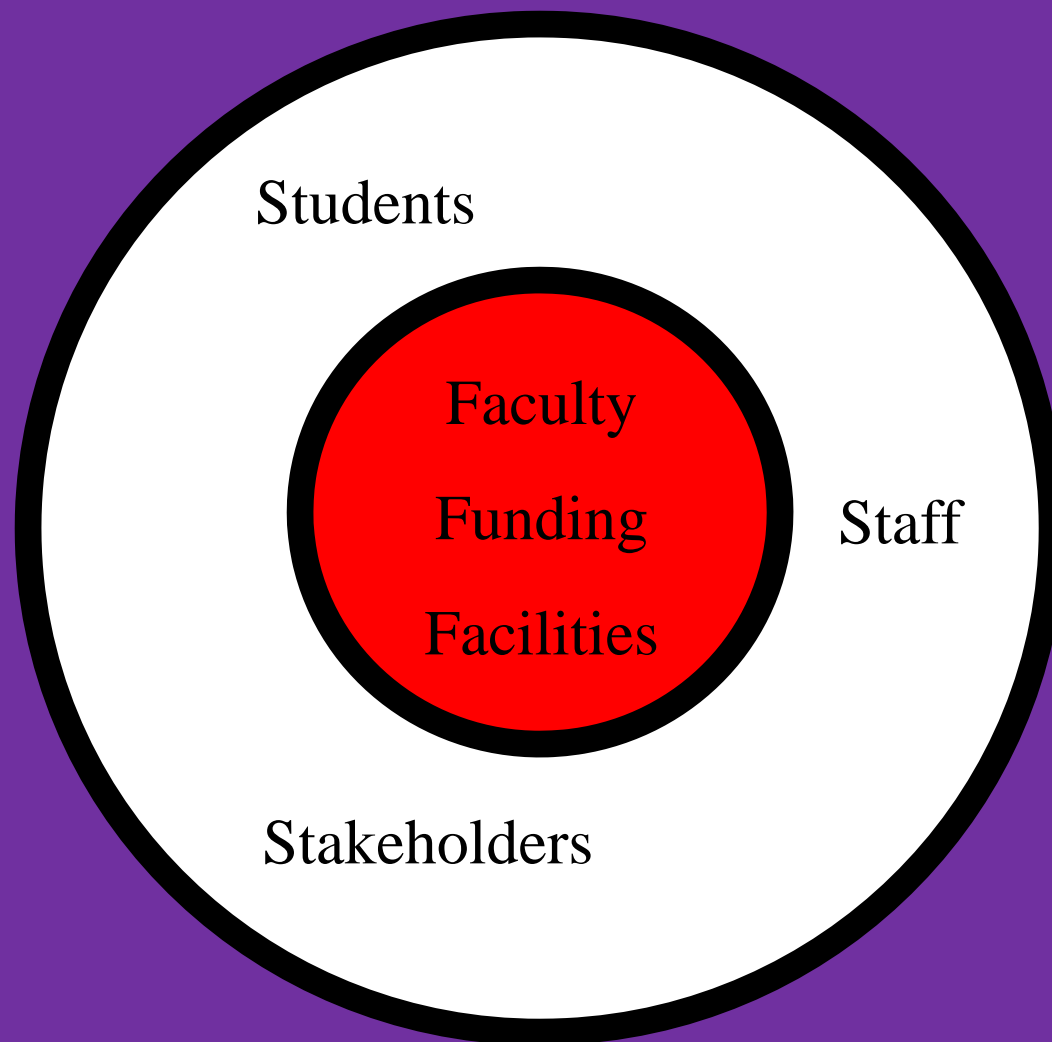
# Mission of K-State's GS&I

*“Ensure the future competitiveness and profitability of the grain industry by creating –*

- **Leaders** with fundamental and professional skills needed to lead grain related clientele through rapidly changing times.
- **Solution-based research** to solve short and long-term problems and issues in grain science and processing.
- **Basic research** to explain the fundamental role of genetics and biochemical components on grain quality, product formulation, processing, and health.
- State of the art teaching, research and pilot **facilities** to ensure that students, faculty and visitors have access to the most modern, efficient and up-to-date resources.
- Strong **partnerships** with AIB, USDA, National Laboratories, Universities, and Industry Associations and Members.”



# My View of K-State's Grain Science & Industry Department





# Strategic Growth and Action Plan for K-State's Grain Science & Industry Programs

- Baking Science Program
  - B.S. in Bakery Science & Management
- Bioprocessing (incl. BIVAP) Program
  - Biorefinery Option in B.S. program
- Feed Science Program
  - B.S. in Feed Science & Management
- Milling Science Program
  - B.S. in Milling Science & Management
- Grain Science M.S./Ph.D. Graduate Program
- International Grains Program

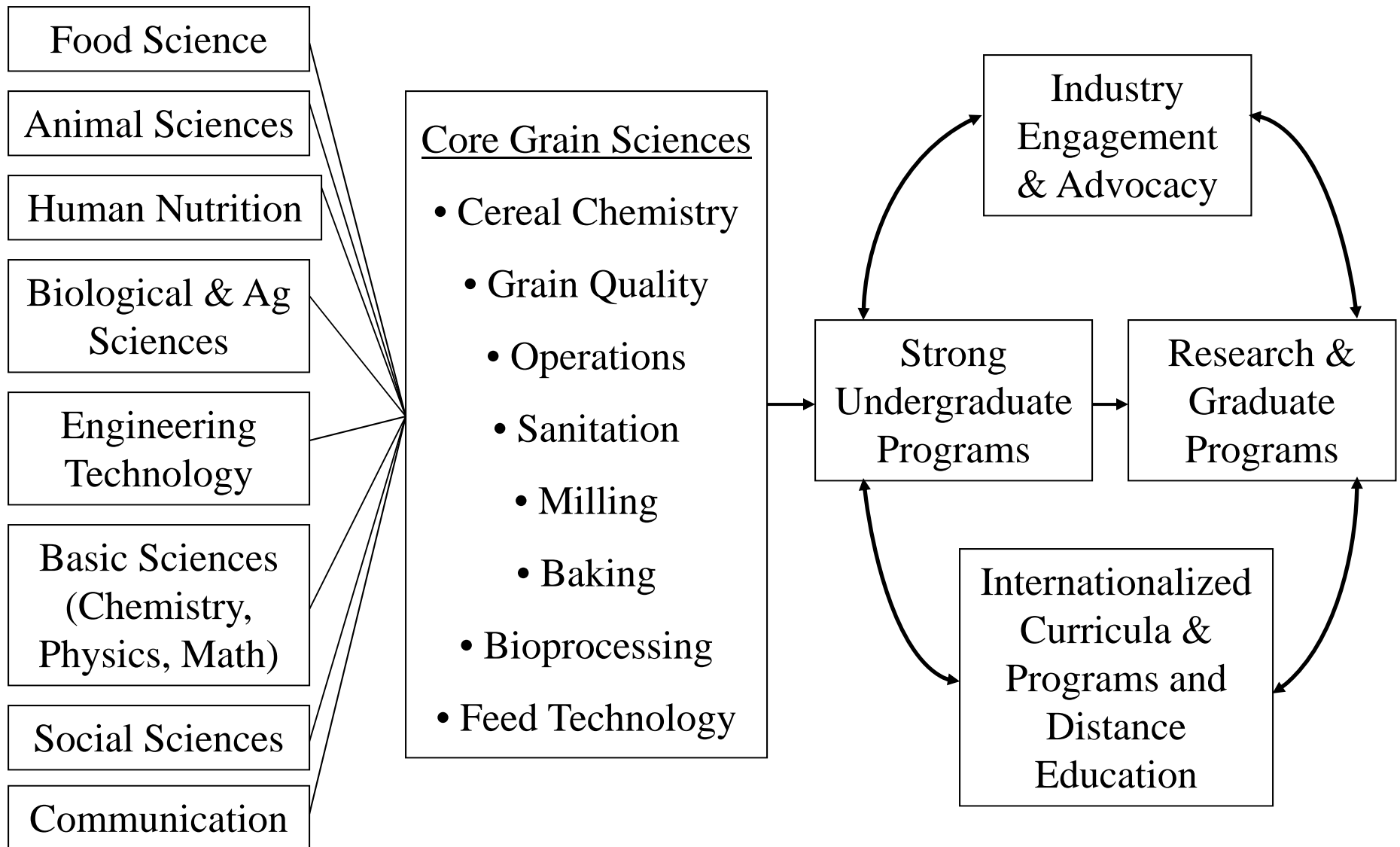
➔ Established goals, identified challenges, developed strategies



*“We are a student-focused, research intensive institution.”* – Jon Wefald, K-State President

*“At a University research is the other half of a great education!”* – France Cordova, Purdue University President

A Model of a successful interdisciplinary program in conjunction with international perspective, distance education and strong industry engagement & advocacy







# Vision for Serving as Head

- Think and plan strategically & cleverly to position ourselves for future success
- Focus on a common purpose
- Consensus to accomplish future goals
- Refine & integrate strategic plan
  - vision, mission, goals, objectives/strategies
    - milestones, target dates
  - work together on a common task



# Approach for Developing a Vision

- Honest assessment and thorough evaluation
  - Strengths & weaknesses
  - Opportunities & challenges
- Communication and consensus
  - Faculty, students & staff
  - Strategic partners & stakeholders
- Develop SMART goals and objectives/strategies
  - Specific, measurable, attainable, realistic, timely
  - Overcome weaknesses & challenges
  - Capitalize on strengths & opportunities

# K-State's Grain Science & Industry Department is/has...

- unique in the world
- renowned for teaching, research and outreach
- outstanding faculty, students and staff
- great start on state-of-the-art facilities
- good funding base with room to grow
- strategic partners and alliances
- extensive stakeholder involvement
- fantastic alumni base



# K-State's Grain Science & Industry Department will...

- be recognized as the global leader
- attract and keep outstanding faculty, students, staff
- expand educational offerings and outreach activities
- increase impact & technology transfer of research
- improve & utilize facilities to the fullest
- grow & expand funding base
- strengthen/expand strategic partners & alliances
- increase stakeholder involvement and impact
- refine & pursue an integrated strategic plan



# My Vision for K-State's Grain Science & Industry Department

*“The global education, research and technology transfer leader for the grain-based food, feed, fiber and fuel supply chains.”*

A warm, orange-toned photograph of a sunset or sunrise. The sun is a bright, glowing orb in the center, partially obscured by dark, silhouetted pine branches in the foreground. The sky is a deep orange, and the overall mood is peaceful and grateful.

**Thank You!**