Cooperative Extension Service and Energy Education

James C. Wade, Ph.D.
Director, Extension and Outreach

NASULGC: A Public University Association
Who is Cooperative Extension?

- 75 Land-Grant Universities
  - 57 States, Territories and DC
  - 18 Historically Black Land-Grants
  - Native American Institutions
Land Grant Universities

• 1862 Morrill Act
  – Agriculture
  – Mechanical Arts
  – Military Science

• Today Major Public Universities
Focus of Land-Grant Universities

- Learning
- Discovery
- Engagement
Legislation Expanded Efforts

- 1890 Morrill Act
- 1887 Hatch Act
  - Agricultural Experiment Stations (Research)
- 1914 Smith–Lever Act
  - Cooperative Extension Service
- 1994 Native American Institutions
Extending Research-based Knowledge

• Engagement and Cooperative Extension
  – Linked to University and Other Research
  – Over 3,000 County Offices

• USDA – Historic and Ongoing Linkages

• Many Other Agencies and Groups

• Engaging Individuals, Business and Communities in Transformational Learning
Cooperative Extension System

- Cooperative is Intentional!
- Non-formal, non-credit learning
- Community-based
  - Learning community often engaged in the development of the learning process
- Often first responders in education
- Deploying knowledge to user communities
- Applied research with users
- Most Programs at no or minimal cost
Transformational Learning

• Setting Learning Outcome Goals
• Developing Education Programs
• Delivering Education Programs
• Measuring Outcome Goals
Seeking Actionable Change

• Changing behavior, habits, policy and practices

• Beyond just knowledge

• Action
Partnerships and Funding

– States through the Land-Grant Universities
– Local Governments – Counties and Cities
– Federal
  • USDA
    – Cooperative States Research, Education, and Extension Service
  • Other Partnerships
– Private Partnerships
  • Foundations, Associations and other
Community-based Programs

- Economic and Community Development
- Families and Home
- Personal Development
- Environment
- Plants
- Animals
- Energy
Economic and Community Development

- Small Business Development
- Entrepreneurship
- Disaster Preparation and Response
- Public Issues Education
- Energy
Families and Home

- Family Financial Management
- Housing
  - Energy Efficiency
  - Environmental Safety
- Parenting
- Caregiving/Elder Care

- Energy

Photo from http://Servingthosewhoserve.org
Personal Development

- Healthy Life Style
- Stress Management
- Nutrition
- Food Safety
- 4-H Youth Development
  - After-school
- Leadership Development

- Energy Choices
Environment

- Water Quality
- Soil Conservation
- Pesticide Management and Use Training
- Home Air Quality
- Climate Change

- Energy
Plants

- Home Horticulture and Gardening
- Small Farming and Community Gardens
- Commercial Crop Production
- Food Processing
- Woodlands and Forests

- Energy Production
Animals

• Ranching
• Veterinary and Public Health
• Commercial Animal Production
• Sustainable Agricultural Systems
• Insect and Pest Management

• Energy and Waste Streams
Cooperative Extension

Energy Responses

• Agricultural Systems
• Renewable Energy
• Energy Efficiency
  – Homes
  – Businesses
  – Local Government/Communities
  – Educational Institutions
Agricultural Systems

- Equipment and buildings
- Indirect energy use
- Integrated energy systems
- Land-based sources of energy
- Sustainable Resources
Renewable Energy

- Bio-fuels and products
- Solar
- Wind
- Methane
- Geothermal
- Co-generation
Energy Efficiency

- Building Sciences
- Agricultural Production Systems
- Food Processing Systems
- Communities
Some History

• Before 1977
  – Farm Efficiency
• 1977 Legislation created energy extension program
  – Eliminated in 1990’s
DOE/NASULGC Partnership

• Pilot project 2005-2008
  – Biomass
  – Housing in Hot-Humid Zone
  – Youth Education in Energy
  – Structures – Educational Programs
  – Integrating Research

• Limited funding
Other Partnerships

• DOE/NASULGC
• Sun Grant Program
• Energy Star
• USDA/REE Energy Science and Education Program
• State Energy Offices
• Many Others
eXtension

• Developed by LGUs
  – Currently funded by LGUs and USDA/CSREES
• 24/7/365 Trusted Information and Education
• Communities of Practice
• http://about.eXtension.org
Possible COPs

• Bio-fuels and Products
  – Ethanol, Bio-diesel, Methane

• Energy Efficient Buildings and Structures
  – Homes, Small Businesses, Educational Institutions, Local Government

• Renewable Energy
  – Scalable energy systems, net-zero farms

• Rural Communities Dealing with Changing Land-use
Program Connections

• For local program information and access call
  – one of the 3,000 local county or city Cooperative Extension Offices, or
  – the state Cooperative Extension Office at the Land-Grant University