Effectiveness of Extension Efforts on Energy

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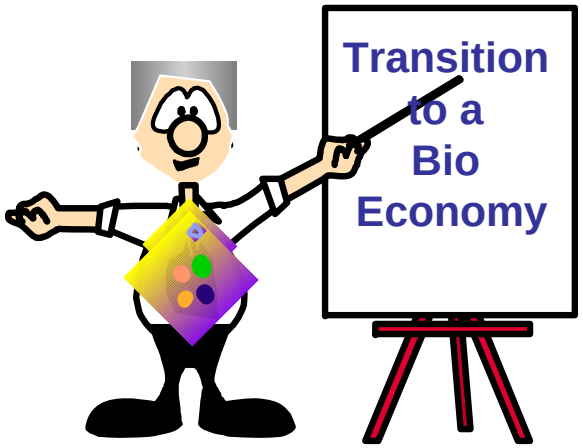
Presentation Outline

- Current Educational Programs
- Educational Programs vs Events
  - Kicking and screaming or forward looking
  - Why differences across disciplines
- Real Follow Through
- How Do We Really Measure Effectiveness?
- Conclusions



Our Perspectives

- Not Old Enough to Discuss Educational Programs that Occurred in the late 1970s and early 1980s
  - Focused on Gasohol
  - Although some at our universities told us how this was once the hot thing only to go away when oil went back down
    - Wouldn't waste their time again
- Focusing on Activities this Century/Decade:
  - Biodiesel production was on a slow growth path
  - Ethanol production was flat
  - Wind energy production was growing but growth was sporadic based on tax credits
  - Solar and methane digesters were being installed but costs were prohibitive

Educational Programs vs Events

- We believe there is a big difference
- Educational program
  - More comprehensive, longer term, often multidisciplinary
  - Very rare because of need for sustained funding
- Events
  - Single meeting or topic
    - Could be one or same meeting, different place
  - Tend to be topic or technology of the day meetings

How We Got Here…

Kicking and Screaming or Forward Looking

- For the most part, educational events have been developed kicking and screaming
  - Energy Policy Act of 2005 led to a near carnival atmosphere for “promoters”
  - Community leaders smelled jobs and taxes regardless of…
  - Our first line of contact – county agents were overwhelmed and unprepared
  - Extension faculty developed presentations “on the fly”
    - The Problem…

How We Got Here…

Kicking and Screaming or Forward Looking

- The Problem:
  - Ag economists generally only had “promoter” data to develop educational content around
    - In most cases clientele didn’t want to hear that a plant might not work in their backyard
  - Agronomists hadn’t really been working on alternative crops like oilseeds because that wasn’t where their funding was coming from
    - Generally had to rely on old demonstration plot data or other states
  - Ag engineers generally didn’t know specialized equipment was needed
- All of these pressures intensified as the Energy Independence & Security Act of 2007 brought about a massive influx of capital and media attention to rural America

How We Got Here…

Kicking and Screaming or Forward Looking

- Not many Universities or Departments in the Forward Looking Category
  - In our opinion only University of Tennessee and Oklahoma State University
    - Probably because they never got the news that the industry died in the 1980s
  - Our own focus on economics at Texas A&M University came really quickly as we noticed the D.C. politicians looking at biofuels as the solution to low commodity prices
    - Ex. Recruited an analyst to work on dairy in 2004 and changed their emphasis to renewables before he moved to town
    - Ex. Have conducted statewide agent trainings each of the last 4 years on different renewable energy topics

Real Follow Through

- Requires $$ and administrative support
  - Hard to get both – at the same time
  - Appears that Univ. of Tennessee has both for cellulosic ethanol
    - Likely others that we aren't aware of...
  - A small number of states have new positions in Energy Economics
- Requires a Research and Extension Effort
  - Ex. Ethanol plant feasibility
    - Need to know a lot more than profitability of the plant to really know the feasibility of such an effort
    - We made a lot of people mad with our report in Texas that said grain based ethanol could work in certain situations but.... Not everywhere and there are a lot of risks
    - Looking pretty smart as Panda plant wasn't finished and recently sold for $0.12 on the dollar

Real Follow Through (Cont.)

- Requires a Research and Extension Effort
  - Back to grain based ethanol example
    - Over time other issues began popping up that weren't initially considered
      - Animal scientists and nutritionists began worrying about feeding DDGS and WDGS and the effects (if any) on taste and performance
      - Water availability and conservation
      - Energy conservation and co-firing DDGS
      - Food and feed vs Fuel
      - What happens when the next generation of technology takes off
        - » Retrofitting and/or scrapping
  - Requires a team because no one person can handle all these issues.....

Broad Failures

- Livestock
  - Livestock impacts have been largely ignored
  - Alternatives and consequences educational efforts ignored livestock and continues to
  - “Producers gain” Not really
  - We told them, but sometimes they didn’t listen
- Education on Energy Types and Uses
  - Transportation fuel – Oil
    - Ethanol, Bio-diesel
  - Electricity – Coal and Natural Gas
    - Solar, Wind, Hydroeletric, etc

How Do We Really Measure Effectiveness?

- In Extension – we survey
- Has Extension been effective?
  - Each state will have their own survey
  - We have done – better than ok
  - New clientele group understands what we do and that we are a valuable resource
- National efforts like eXtension are ongoing
- At least in our state, local people want a face to face explanation – and we give it to them – even though it often isn't what they want to hear

Conclusions

- In our opinion, Extension has risen to the challenge of delivering educational programs on energy
  - In some states, surely better than others
- The successful programs were multidisciplinary and on-going
  - Otherwise, they weren't a program but an event or seminar
- Easy and probably obvious to say those states that have made a substantial financial commitment to energy research and education are going to lead