Effectiveness of Extension Efforts on Energy

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The Role of Extension in 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
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