

# Establishing a Dedicated Energy Crop

Kenny Hamilton  
Tellico Plains, Tennessee



**The Role of  
Extension in Energy**

**June 30 – July 1, 2009  
Little Rock, AR**





# My Operations

- Two operations
  - Manage Stokely Farm
  - My Farm
- Approximate Farm Location
- Farm Size
- Farm Characteristics
- Farm Organization and Objective
- Relationship with TN Extension





# Farm Organization and Objective

- Managed Farm
  - is owned by Mr. William B. Stokely, III
  - Reports to a vice president and CEO
  - Has accountants
- Both Farms Objective is to maximize profit







# Farm Characteristics

## Crops Grown

- Soybeans
- Wheat
- Corn
- Apples
- Switchgrass
  - 12 acres prior to contract
  - 122 acres in the first contract year
  - 86 acre in the second year
  - Total of 220 acres in switchgrass

## Livestock

- Beef cow/calf
- Stocker operation





# Relationships with Extension

- Historical
  - Long relationship with Extension
    - Farm has been contracted by agribusinesses to conduct plot field level experiments.
    - Farm hosted east Tennessee summer weed control tour for Extension for a long time



# Relationships with Extension

## ○ Historical

- Farm has cooperated with TN Extension as a testing area since 1982
  - Weed control work
  - Variety testing
  - Crop fertilization
  - Beef Cattle Production Demos
  - Vegetable crop weed control



# Relationships with Extension

## ○ Historical


- Demonstration switchgrass production field, 2007
  - Done before Switchgrass was considered as a biofuels crop
  - Farm has hosted a number of tour groups from the US and other countries
- Trip to West Tennessee to develop an understanding of production and harvesting techniques
  - Harvesting stories
    - Flat tires
    - Baler would not handle crop
    - To much to put through baler








# Relationships with Extension

- Historical
    - Attended informational meetings
      - Reluctance by individuals to accept facility
        - Truck Traffic
        - Odors from processing
      - Notion that this new venture might not work
        - Having a 12 acre field of switchgrass successfully established assisted farmers in deciding to participate
      - Extension grower meetings
- 



# What made Switchgrass right for us?


- Productivity on marginal Soil
    - 20 bushel soybeans
  - Equipment required to grow switchgrass
    - Drill equipped with small seeder
    - Harvesting equipment
  - Low risk contract offered by UT
  - Assistance Extension provided in establishing a crop
  - If switchgrass market did not evolve then soil would be improved
- 



# What Risks are THERE?

- Supply

- Market

- Plant was not and still is not established though construction is underway.
  - Contract for three years had to cover costs of establishment and compete for land that was in crops at a time when high prices for those crops were present.
- 



# What Risks are THERE?


## ○ Supply

- Experiences gained in establishing Switchgrass.

### ○ Planning is critical to successful establishment

- Weed history
- Planter calibration
- Weed control

### ○ Moisture requirements

- not critical, but you do need some water
  - More tolerant to drought conditions than other crops
- 



# What Risks are THERE?


- Did not know what marginal soils would yield
- How to harvest materials in excess of 5 tons per acre?







## Contract Reduced Risks

- Set a per acre value that covered costs as well as opportunity costs. The contract established a safety net.
    - For example, the land that was selected to be planted into switchgrass was 20 bu. bean ground. In order to breakeven comparing profit from bean ground to  $\$450/\text{acre} + \text{seed} - \text{expenses}$ , bean price would have to exceed  $\$18/\text{bushel}$ .
    - Fuel clause that adjust the contract value upwards if fuel costs were higher during the year.
- 



## However

- Contract was good for 3 years and it paid for developing an asset to the farm and the region.
  - Now I have an asset in the ground but we have to wait and see how the market develops.
  - Prior to this initiative, people were worried about how many houses their land would grow and now they are thinking about growing an energy crop.
- 