Native warm-season grasses for bioenergy and forage

Steps for Success
1. Planning
2. Weed management
3. Planting
4. Cutting or grazing management

Planning
1. New ground
2. Cropland
3. Hayland/pasture
4. Bermudagrass fields

Weed management

No-till Planting

Weed management

July 16 2012
July 15 2013

Keyser et al., 2011b
Big bluestem, Little bluestem, Indiangrass, Switchgrass, Eastern gamagrass

**Management**

Switch/Gama:
- May – Late June: 1600-2000 lbs/acre
- Late June – Early Aug.: 1400-1600 lbs/acre

BB/Indian:
- May – Late June: 1200-1400 lbs/acre
- Late June – Early Aug.: 900-1200 lbs/acre

**Grazing**

**Hay Production**

**Cutting/Grazing Height**

- 12” height: 99%
- 8” height: 51%

**Leafiness (%) at 12” height**

Trócsányi et al., 2009
Virginia Upland ecotype
Renewable Fuels Standard

![Graph showing Biofuel production](image)

**Biofuel production**

- Biochemical conversion
- Thermochemical conversion

**Cellulosic Ethanol Conversion**

- Biomass
- Acids
- Pretreatment
- Enzymatic Hydrolysis
- C5 sugars
- C6 sugars
- Fermentation
- Distillation
- Ethanol

**Thermochemical Conversion**

- Excess air
- Combustion
- Heat
- Partial air
- Gasification
- Gases
- No air
- Pyrolysis
- Liquids

**Program Assistance**

- Environmental Quality Incentives Program
  - Through NRCS
  - Pay a portion of the average cost associated with the developed conservation plans

- Farm Wildlife Habitat Program
  - Through TWRA
  - Provides 75% reimbursement (up to $2,000 per contract per year) to improve wildlife habitat
Program Assistance

- Biomass Crop Assistance Program (BCAP)
  - Supports the establishment and production of crops within project areas for conversion to bioenergy
- Project areas and producers are approved through an application process
- Producers within project areas may receive
  - Cost share payments for establishment
  - Annual rental payments
  - Payments for harvest

Further information

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