Short-Rotation Woody Energy Crops
A New Opportunity for Pennsylvania Farmers

Woody Crop Potential

- Dramatically increases renewable energy supply for the Commonwealth
- Sustainable, environmentally sound, fully renewable resource
- 17 million acres of forest in PA today. Dedicated crops can dramatically increase supply
- In 2025, energy crops available in PA (per UT study, in tons):
  - Corn: 710,000
  - Soybeans: 40,000
  - Wood: 4,260,000
  - Dedicated Energy Crops: 9,110,000

Dedicated Woody Crops for Energy Consideration

- Strong potential for both farm and forest owners
- Perennial grasses such as switchgrass or miscanthus
- Very short-rotation (3-5 years) tree crops such as willow and poplar
- Woody crops are hydrocarbons like fossil fuels but are carbon neutral in use for energy purposes

What’s in it for agriculture and forestry?

- Increased farm and forest income
- Added value uses, such as ethanol and other hydrocarbon products
- Alternative enterprises
- More productive uses of marginal lands
- Assist in resolution of air, water and soil quality problems
- Reduced reliance on government payments
- Enhanced rural economies

Potential Wood Sources

- Short-rotation tree crops
- Non-merchantable timber from timber harvest operations
- Thinnings for stand improvement
- Un-utilized standing timber with no apparent market
- Blowdowns
- Urban/suburban removals
- Fire suppression removals
- Construction lumber salvage

Dedicated Short-Rotation Tree Crop Technology

- Trees reach harvest in 3-5 years
- Growth rates from 3-12 dry tons of biomass per acre per year (one dry ton has roughly the same energy content as one barrel of petroleum)
- Willow and poplar species are likely to be the best starting point for PA.
- Extensive research over 20+ years by SUNY School of Environmental Science & Forestry at Syracuse, NY
- Three willow research trials launched in PA in late 1990s at Easton, Roaring Branch and Montour Preserve.

For more on 25x’25, go to www.25x25.org.