Growing Switchgrass in Ontario

Don and Phyllis Nott and Family
Clinton, Ontario
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How We Got Started

Where We Are Now

- Near Clinton, Huron County
- Farm 2,800 acres in total
- Two major farms
  - One near Clinton on No. 8 Highway
  - One near Whitechurch on No. 86 Highway
  - Total of 345 acres of switchgrass, established spring 2006

The Dos and Don’ts of Growing Switchgrass

- The most risk-free crop a farmer can grow
  - withstands frost
  - withstands heavy rain
  - tolerant of drought
  - to date, we know of no moulds or fungus
  - it outruns weeds
  - this crop does not spoil in the field

The Dos and Don’ts of Growing Switchgrass

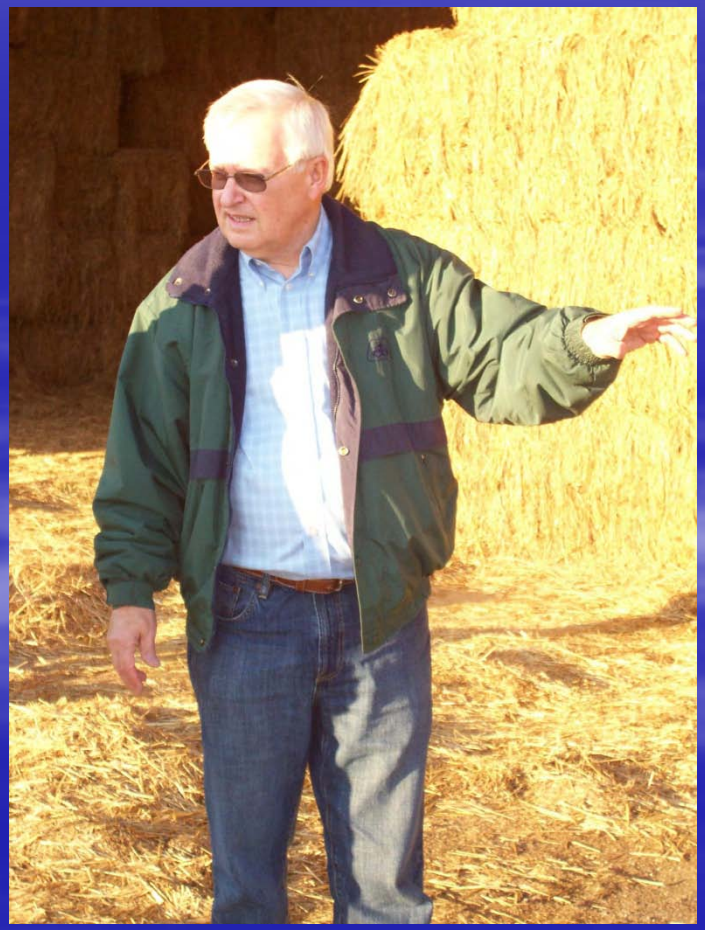
First-Year Establishment

- Field preparation
  - Standard farm equipment
- Seeding rates
  - Variety choices – Cave-in-Rock recommended for this area
  - Current research focusing on better-yielding varieties
- Cover crop
- Weed control (herbicides or mowing)

The Dos and Don'ts of Growing Switchgrass

Second-Year Management

- Weed control
- Fertilization
  - 50% yield potential



The Dos and Don’ts of Growing Switchgrass

Third Year – First Full Production Year

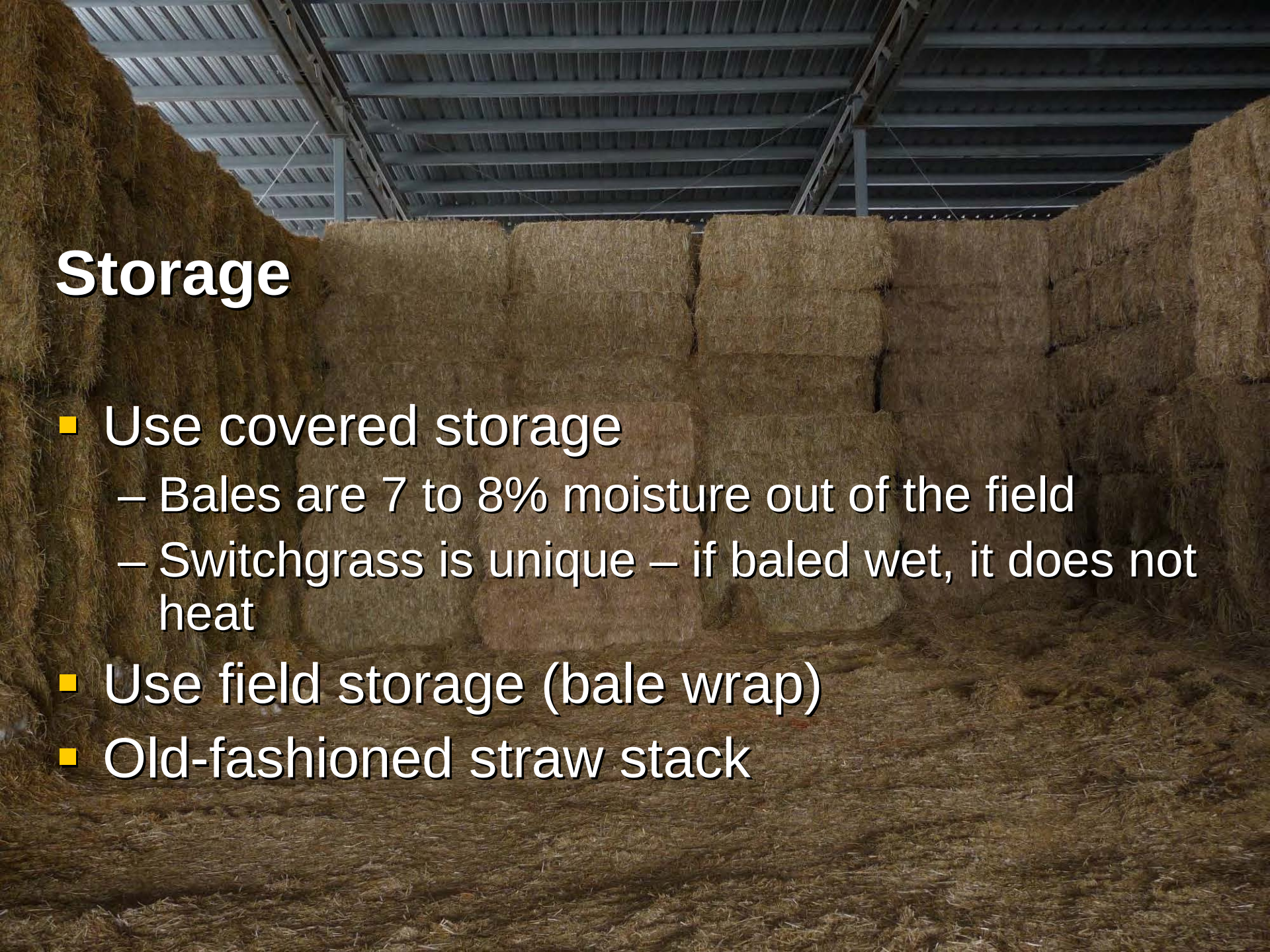
- Fertilization optional
- Herbicide free
- Yield
  - Full production: 4.0 – 4.5 tonnes/acre on land capable of producing normal yields of corn, soybeans, wheat

How to Harvest

- Standard farm equipment – balers, forage harvesters and discbines
- Cut in late fall
- Leave the swaths in the field over winter
  - 4- to 5-inch stubble
  - Much like swathing grain
  - Over-wintering swath changes the structure of the straw and it will not rot like other straw
  - Over-wintering improves the fuel characteristics (lowers chlorine, ash, phosphorus, potassium, nitrogen)
- Harvest in April to early May
  - 45-day window of opportunity
- Can use a baler or forage harvester
- Beware of flat tires! Sharp stubble

Why We Like This Crop

- Perennial
- Grows on marginal soils
  - **Does not grow in a duck pond!**
  - **Does well on lighter, sandy soils**
- Prevents erosion
- Once established, it is good on hilly farms
- Environmentally friendly, sustainable crop
  - **Wildlife-friendly (maintains biodiversity)**
  - **Carbon-neutral**
  - **If used for biomass fuel, the next crop re-captures the carbon that's released**
  - **Short carbon cycle compared to burning wood**
  - **Improves soil structure**
    - **How much still unknown (ongoing research)**
  - **Improves moisture-holding capability**
  - **Is field-tile-friendly**



Storage

- Use covered storage
  - Bales are 7 to 8% moisture out of the field
  - Switchgrass is unique – if baled wet, it does not heat
- Use field storage (bale wrap)
- Old-fashioned straw stack


I gave you the good, the bad …
and the ugly begins now!