

# Switchgrass In St. Lawrence County


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1998

 Canada wanted to make paper from switchgrass in Cornwall – fewer chemicals to make high quality paper

 Received call from towns in Adirondacks capping land fills. Rec's calling for many pounds of switchgrass to seed crops.

 We had no experience at that time growing switchgrass here in NNY.


1999

 Received call from Quebec wanting 10,000 acres of switchgrass.

 French firm building plant to make pellets for fuel.


2000

 With help from NRCS in Big Flats, established a variety trial at the St. Lawrence County Extension Farm.

 Received seed from Big Flats Plant Materials Center, Elsberry, Missouri Plant Materials Center, Cape May, NJ Plant Materials Center, and NRCS Nebraska.





 **Ten varieties were looked at and % stand after seeding.**

<input checked="" type="checkbox"/> Shelter	80%
<input checked="" type="checkbox"/> Carthage	30%
<input checked="" type="checkbox"/> Forestburg	95%
<input checked="" type="checkbox"/> Sunburst	95%
<input checked="" type="checkbox"/> Blackwell	75%
<input checked="" type="checkbox"/> Nebraska	90%
<input checked="" type="checkbox"/> Pathfinder	60%
<input checked="" type="checkbox"/> Shawnee	75%
<input checked="" type="checkbox"/> Trailblazer	90%
<input checked="" type="checkbox"/> Cave-in-Rock	75%



# Established plots on June 20, 2000, two replications

- ✓ 2000 one of wettest years we ever had
- ✓ Planted June 20, 2000
- ✓ Used JD drill at 18-20#/A seeding rate (high)
- ✓ 200#/A 0-20-20 used
- ✓ Round-up at 2 qts/A was used prior to plowing to have as clean a site as possible
- ✓ The higher seeding rate was used to compensate for low germination and hard seed percentage



- ☑ A firm, smooth seedbed was created and seed was set at about one-fourth inch with drill and press wheeled in
- ☑ Late August a light rate of N was used per acre about 30#. Need more data to support this application

 Soil is a silt loam soil, can be very wet but does drain

## Observations Made

1. Not easy to establish switchgrass. Weak seedling does not compete well.
2. Be particular with seedbed preparation. Get good seed to soil contact, do not plant deep.
3. Buy good viable seed. Old seed results in poor stands.
4. After establishment year 40 – 50# N./A is beneficial to the crop.
5. Here in the North Country cutting at the wrong time encourages the establishment of bluegrass & winter annuals affecting the stand.

6. There are a few herbicides that can be used but none legally labeled.
7. Glyphosate used when plant is dormant cleans up the stand.
8. Critical to apply N year after seeding to encourage the stand to thicken and strengthen.
9. Insects generally are no problem. Common armyworm will do some damage.
10. Wildlife flourish around this crop but no real damage occurs. Birds do very well.
11. Crop stands well thru winter. April harvest for a bio-fuel can be done.







# Switchgrass

	<b>2001 Yields</b>		<b>2002 Yields</b>	<b>2003 Yields</b>
	<b>Fertilizer</b>	<b>No Fertilizer</b>	<b>Fertilizer</b>	<b>Fertilizer</b>
Shelter	1.42	0.27	1.50	---
Carthage	0.96	0.32	1.48	---
Forestburg	2.00	0.42	2.73	3.15
Sunburst	2.07	0.58	2.69	3.83
Blackwell	1.98	0.49	3.67	2.52
Nebraska	2.23	0.46	3.34	2.86
Pathfinder	1.63	0.30	2.20	2.87
Shawnee	1.51	0.48	2.37	2.42
Trailblazer	1.75	0.38	2.97	2.74
Cave-In-Roda	1.42	0.47	3.90	3.29
	Harvested 10/10/01		Harvested 10/8/02	Harvested 10/7/03

- Yields not pulled in '04, '05, '06 due to lack of funding
- Yields will be pulled in April '07 for '06's growing season
- Yields are in Tons Dry Matter/A





# Establishment and Management Of Switchgrass

## Agronomy Fact Sheet # 20

### Variety Selection

Any one in my trials will work. Cave-in-Rock has looked very good.

New varieties need testing

### Site Selection

Grow on many soils

Best on well-drained loam, sandy loam soils

## **Fertility Management for Establishment**

Use P & K at establishment, N encourages weeds

Optimal pH is 6.5

## **Seedbed Preparation**

A good firm, smooth seedbed – may mean pre & post seeding rolling

## **Seeding Rate, Method and Timing**

7-9 #/A of pure live seed

1/4 – 1/2-inch seeding depth

## **Weed Management**

Site preparation chemicals can be used

2,4-D type materials can affect plant development

## **Fertilization of Established Stands**

After seeding year 50-75#/A nitrogen is recommended

## **Manure Management**

Can be used but use may be limited

## **Harvest and Stand Longevity**

No harvest in establishment year

Spring harvest no problem