# Forage Sorghum Trials 2013

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Cornell University Cooperative Extension South Central New York Dairy & Field Crops Team



 How well will bmr-sorghum fit in a double cropping system with a fall grain harvested for early spring forage?

Will it be a cost effective crop with consistent performance, adequate yield on soils not ideally suited for corn/alfalfa rotation?



# Site: Birdsall

- Planting Date: June 5, 2013, noon
  - Air temp:  $65^{\circ}F$  at noon,  $75^{\circ}F$  at 2 pm
  - 2" soil depth:  $64^{\circ}F$  1.5" soil depth:  $70^{\circ}F$
  - Planting depth: 1"
- Planting Rate: 10 lbs/ac
- Variety: AF7201 (13,000 seeds/lb)
- Planting Tool: Great Plains 1006 no-till drill- 7" rows
- Production: Conventional
- Previous Crop: corn silage
- Location: Town of Scott, Cortland County, NY
- Field Size: 4.3 ac

# Site: Birdsall

- Fertilizer: 100 lbs 19-19-19 pre-plant
  - No manure, Weather did not cooperate for sidedress
- Weed Control: concep treated seed
  - 1 qt Atrazine & oil, 2 or 4 oz Banvel (need to confirm)
  - Applied July 12
- Soil Type: Bath
- Soil Fertility: pH-5.8, P & K high ratings
- Location: Town of Scott, Cortland County, NY

### Birdsall Late June – prior to weed control

### Birdsall Mid-season– post weed control

Closeup

Field View

### Aug. 29, 2013 Birdsall

Field View-front

Field View-side

### Birdsall – Lodging at harvest

# Harvest 10/5/2013 (Birdsall)

## Site: Birdsall

Yield: Sorghum – 3.7 tons/ac@35% DM Nearby Corn – 11.0 tons/ac@35% DM
Moisture at Harvest: 76.1%

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Site: Birdsall-nearby corn

Birdsall Cover Crop (spring 2014 view) planted 10/10/2013

# Site: Dawson

- Planting Date: June 5, 2013 8:30 am
- Air temp: 51°F 2" soil depth: 58°F 4" soil depth: 52°F
- Planting depth: ¾-1"deep
- Variety: AF7201
- Planting Rate: 10 lbs/ac
- Planting Tool: Conservation drill on 28" rows
- Followed by brillion cultipacker w/ teeth down
- Production: Conventional w/ concep treated seed
- Previous Crop: corn silage
- Tillage: Disked 3x and rolled
- Field Size: 5.3 ac

Dawson - early season - post planting

## **Dawson-Weed Control – July 12**

#### Aug. 29, 2013 Dawson

#### Thin stand in upper 1/2 of field

#### Wet area- poor establishment (This area never recovered from early flooding)

Good stand in lower 1/2 of field  $\rightarrow$ 



## Sept. 17, 2013 Dawson Severely lodged sorghum

### **View from the chopper - Dawson**

Stating Inching we was

## Sept. 17, 2013 Dawson

One of the challenges of BMR sorghum. It can lodge before harvest and suffer significant field loss.

## Site: Dawson

Harvest Date: September 17, 2013
Yield: Sorghum – 2.2 tons/ac@35% DM Nearby Corn – 6.6 tons/ac@35% DM
Moisture: 79%

### Aug. 29, 2013 Dawson

## Sorghum $\checkmark$





Dawson – Post Harvest. Front field corn silage. Back field – sorghum. Note weed pressure and harvest loss from downed sorghum.

### Site: Stow

#### Planting Date: June 25, 2013 noon

- Air temp: 80<sup>0</sup>F
- 2" soil depth: 64°F 1.5" soil depth: 70°F
- Planting depth: 1 3/4"
- Variety: AF7101 (12,000 seeds/lb)
- Planting Rate: 100,080 seeds/ac
- Planting Tool: Cyclone 900 Case air planter
- Production: Conventional Concep treated seed
- Previous Crop: forage sorghum
- Tillage: plowed and disked
- Location: Town of Breesport, Chemung County, NY
- Field Size: 20 ac

#### Site: Stow

- Fertilizer: 100 lbs/ac urea pre-plant

  300 lbs/ac 10-20-20 at planting

  Weed Control: 1.5 qts Prowl & 1 qt atrazine
  - Timing: early post emergence
- Soil Type: Chenango channery silt loam
- Soil Fertility: NA
- Location: Town of Breesport, Chemung County, NY

# Planting 6/25/2013 (Stow)





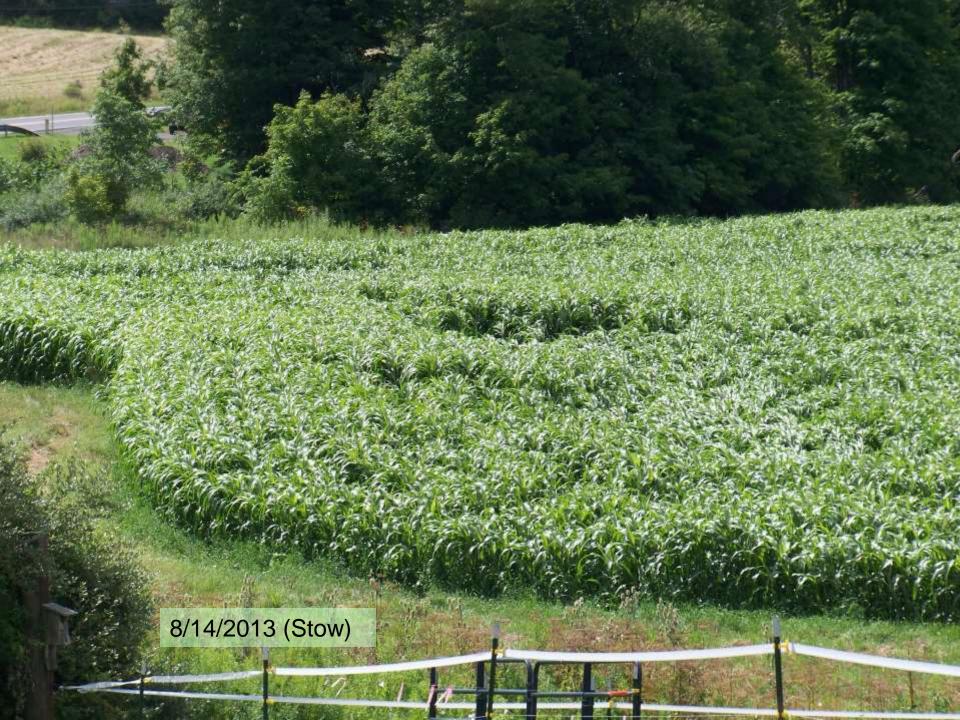


#### Non-dwarf-AF7101

#### Change in varieties

Brachytic dwarfs (experimental varieties: XAF4452 & XAF4456)





### Stow Harvest Oct. 30, 2013

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# Site: Stow

Harvest Date: October 30, 2013 Yield: Sorghum – 11.8 tons/ac@35% DM Moisture: 67.2%

# • Site: Tuning

- Planting Date: June 25, 2013
  - Air temp: 82°F , slightly overcast
  - 2" soil depth: 79°F 4" soil depth: 72°F
  - Planting depth: ½ 3/4"
- Variety: AF7201(13,000 seeds/lb)
- Planting Rate: 15 lbs/ac
- Planting Tool: drill, 30" rows
- Production: Organic, non-organic untreated seed
- Previous Crop: sod
- Tillage: moldboard plow and disked 2x
- Fertilizer: 5 tons/ac cow manure
- Weed Control: tine weeder and cultivation

# Site: Tuning

- Soil Type: Volusia
- Soil Fertility: pH 5.4 Plow, K high
- Location: Town of Cincinnatus, Cortland County, NY
- Field Size: 3 ac

Tuning Sorghum July 13, 2013

# Tuning Sorghum July 13, 2013

#### August 16, 2013 Tuning

## ↓ Corn →

# ← Sorghum ↓

August 16, 2013 Tuning

#### Tuning Sept. 6, 2013 - sorghum

Tuning Sept. 6, 2013 - corn



- Harvest Date: October 5, 2013
- Yield: Sorghum 2.7 tons/ac@35% DM Nearby Corn – 7.1 tons/ac@35% DM
- Moisture: 79%

	Yields		
Site	Sorghum T/Ac @ 35% DM	Corn Silage @35% DM	
Birdsall	6.1	10.0	
Dawson	2.2	6.7	
Tuning	2.7	11	
Stow	11.8	NA	

#### Table 3. Corn Harvest Summary

Site	Silage Variety	Harvest Date	Harvested Area (ac)	Dry-matter at Harvest (%)	Equivalent Yield: T/Ac @ 35% Dry matter
Tuning	Doeblers UT 242 (85 day)	10/5/2013	.74	32	7.1
Birdsall	Dekalb EB90RR2 (90 day blend)	10/5/2013	.20	39	11.0
Dawson	Pioneer 8906 RR (84 day)	9/17/2013	1.5	36	6.6