
Eastern Black Nightshade
& Ripener Research
Al Orgeron
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AgCenter
Research · Extension · Teaching

Eastern Black Nightshade *Solanum ptycanthum* Dunal

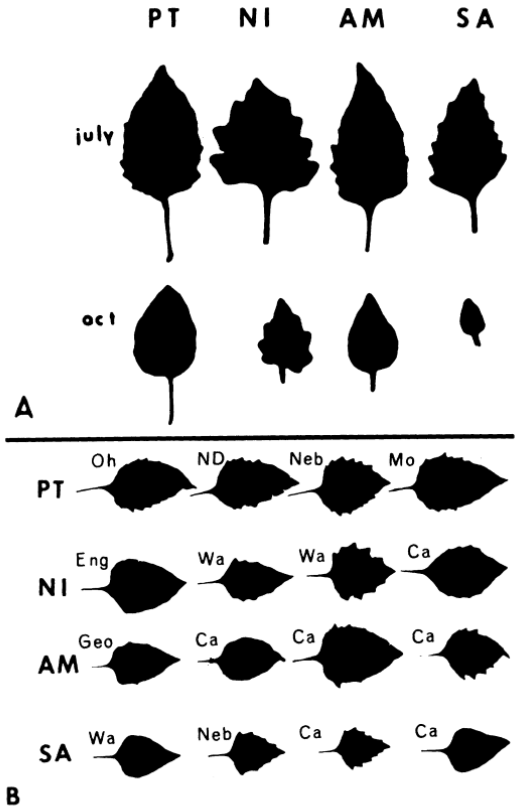


Figure 1. Variation in leaves as an example of variation in vegetative characteristics. *S. ptycanthum* (PT), *S. nigrum* (NI), *S. americanum* (AM), *S. sarrachoides* (SA).

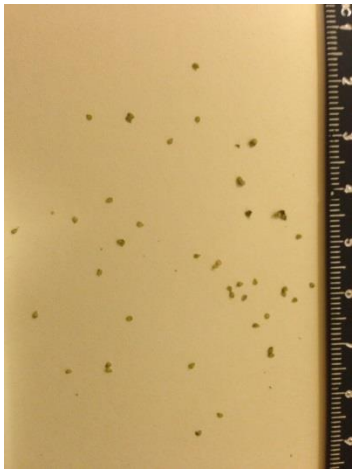
A. Variation in relative size and leaf margin of one plant of each of the four species at different times during the growing season.
B. Variation in leaf margin in four accessions of each species grown under uniform conditions (California [Ca], England [Eng], Georgia [Geo], Missouri [Mo], Nebraska [Neb], North Dakota [ND], Washington [Wa]).

Characterization of Black Nightshade (Solanum nigrum) and Related Species in the United States' A. G. OGG, JR., B. S. ROGERS, and E. E. SCHILLING

EBN

- Annual/short lived perennial
- Native to North America
  - East of the Rocky Mountains
- 2002 Perennial
  - Kentucky
  - Illinois
  - Indiana
  - Missouri

Eastern Black Nightshade



- Sept.18,2014
- Plant height > 6ft
- Berries 1200+
- Seeds = 50-100 per berry
- Total seed from this plant is approximately 90,000

At-Planting Study

- H.E. Harper Cheneyville, LA RCB - 40' X 6' Plots - 4 Reps

- Authority MTZ 16,24 and, 32 oz/a
- Valor 6 and 8 oz/a
- Dual Magnum 1.5 pt/a
- Callisto 6 and 7.7 oz/a
- TriCor 2 lb/a

Large Scale At-Planting Study

- H.E. Harper Cheneyville, LA
  5 rows 1 acre plots
  4 Reps
  L01-299

- Authority MTZ 32 oz/a
- Valor 6 oz/a
- Nontreated
  - August 27th

- TriCor 2 lb/a
  - September 17th

Nontreated
Sept 18th

Nontreated

Valor 6 oz/a
$36

Authority MTZ 32 oz/a
$46

-Sept 17th field treated with 2 lb metribuzin
-Re-hip rows Nov
-Nov 12th field treated with 1 lb metribuzin
-Pictures on Nov 24th

14 days after 1 lb metribuzin Nov 24th

Dec 8th

Spring EBN Studies

- Roy Linzay, Cheneyville
- 2-4 inch EBN

- Atrazine 2 qt/a
- TriCor 2 lb/a
- Brash 1 qt/a
- Callisto 3 oz/a
- Nontreated
- All treatments had NIS added at 0.25%

14 Days After Treatment

Atrazine

TriCor

Nontreated

Brash

Callisto

2-4 inch Eastern Black Nightshade

			Mar-17-2014	Mar-24-2014	Mar-31-2014	Apr-9-2014	Apr-21-2014
			----------% Control----------				
Treatment	Rate	Unit	7 DAT	14 DAT	21 DAT	42 DAT	56 DAT
Atrazine	2	qt/a	33.8	52.5	50.0	42.5	18.8
Metribuzin	2	lb/a	32.5	32.5	43.8	20.0	0.0
Brash	2	pt/a	51.3	65.0	86.3	86.3	86.3
Callisto	3	oz/a	45.0	72.5	91.3	92.5	81.3
Nontreated			0.0	0.0	0.0	0.0	0.0

Nontreated
42 Days After
Treatment

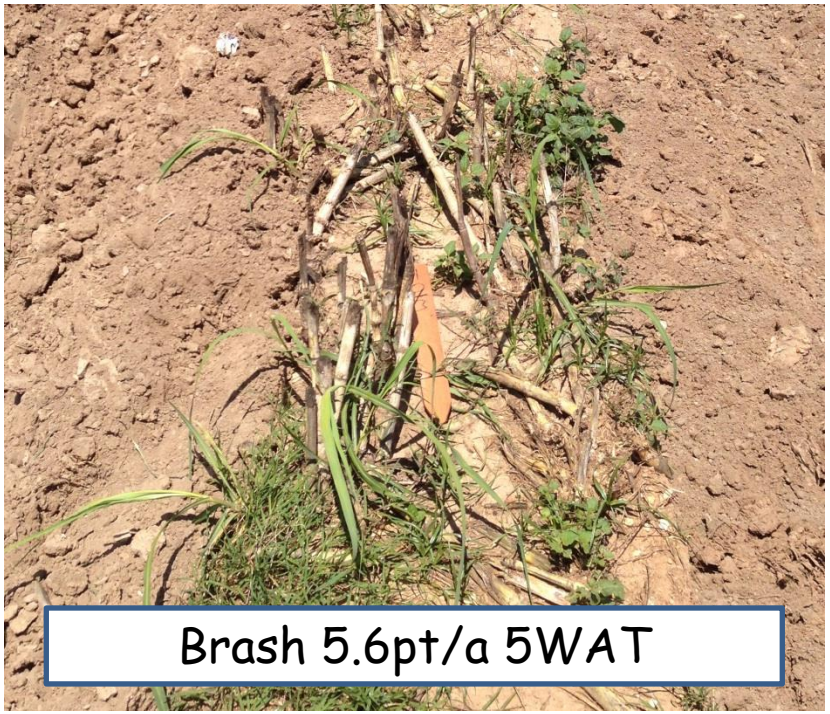
4-8 inch Eastern Black Nightshade

Belmont Farms, Uncle Sam, LA

March 10, 2014
1.5 pt/a of Weedmaster +
1.25 lb/a of TriCor 75 DF

Experiment Application 3-26-14

		% Control
Treatment	Rate	5 WAT
Callisto 4L	3 oz/a	60
Brash 3.87L	2 pt/a	43
Brash 3.87L	5.6 pt/a	68
Clarity 4L	1 qt/a	64
Outlaw 2.54L	2 pt/a	59
Nontreated		0



8-12 inch Eastern Black Nightshade

Belmont Farms, Uncle Sam, LA

March 10, 2014
1.5 pt/a of Weedmaster +
1.25 lb/a of TriCor 75 DF

Experiment Application 4-9-14

		% Control
Treatment	Rate	5 WAT
Callisto 4L	3 oz/a	26
Brash 3.87L	2 pt/a	25
Brash 3.87L	5.6 pt/a	35
Clarity 4L	1 qt/a	23
Nontreated		0

July 14, 2014
in shaded sugarcane

Spring EBN Control

- Apply herbicide in early spring and target 2-4 inches plants
  - Weedmaster/Brash @ 1 qt/a
  - Callisto @ 3 oz/a

2014 Large Scale Ripener Experiment

- Armant Farms, Vacherie, LA
- HoCP 96-540 second ratoon
- RCB with 3 replications
- Moddus™ 19 oz/A applied 57 days prior to harvest (August 27, 2014)
- Roundup PowerMax® 5.3 oz/A applied 29 days prior to harvest (September 24, 2014)

(Cont)

- Harvested October 22, 2014
- At least 2 truck loads from each plot
- Front & back compartments cored and averaged to calculate TRS
- Tonnage was calculated by using truck weight from factory and corresponding plot area.

2014 Results

Ripener Treatment	TRS lb/ton	% TRS Increase	Sugarcane Yield Tons/A	% Sugarcane Yield Decrease	Sugar Yield lb/A	% Fiber
Nontreated	197 b		47.4 a		9307 a	17.3 a
Moddus (19 oz./ac)	220 a	11.8	42.0 b	11.4	9216 a	18.1 a
PowerMax (5.3 oz./ac)	224 a	13.9	44.3 ab	6.4	9917 a	17.6 a
P-value	0.0157		0.0407		0.1334	0.7707

2013-2014 Average

Ripener Treatment	TRS lb/ton	% TRS Increase	Sugarcane Yield Tons/A	% Sugarcane Yield Decrease	Sugar Yield lb/A	% Sugar Yield Increase	% Fiber
Nontreated	184 b		41.2 a		7672 ab		18.1 a
Moddus (19 oz./ac)	200 a	8.4	37.7 b	8.5	7612 b	-0.8	19.3 a
PowerMax (5.3 oz./ac)	207 a	12.2	38.9 ab	5.6	8123 a	5.9	19.1 a
P-value	0.0016		0.0499		0.0419		0.2175

Conclusions of the 13-14 Studies

- Glyphosate and Moddus increased TRS by 12.2 and 8.4%, respectively.
- Moddus significantly reduced cane tonnage by 8.5% or 3.5 tons per acre.
- Sugar yield for Glyphosate treated cane was 511 lb of sugar per acre greater than Moddus treated cane.

Questions ?