

Entomology Appendix A.: Agronomic, Rainfall, and Plot Maintenance Information

Location:	St. Thomas (Pembina County), ND – Wayne Lessard Farm – <i>Sugarbeet Root Maggot Trials</i>	
Plot size:	Six 35-ft long rows, 4 center rows treated	
Design:	Randomized complete block, 4 replications	
Soil name:	Glyndon silt loam	
Soil test:	Organic matter = 3.1%	pH = 7.8
Soil texture:	25.2% sand	53.3% silt 21.6% clay
Previous crop:	Potatoes (2016)	
Soil preparation:	Field cultivator (1x)	
Planting depth:	1.25"	
Herbicides applied:	June 12	Roundup PowerMAX (32 fl oz/ac) + Veracity (3 qt/100 gal)
	June 29	Roundup PowerMAX (22 fl oz/ac) + Veracity (3 qt/100 gal) + Outlook (18 fl oz/ac)
Rainfall (after seedbed preparation):	May 16	0.15"
	May 20	0.15"
	May 21	0.38"
	May 22	0.08"
	May 27	0.17"
	May 29	0.03"
	Total/May	0.96"
	June 2	0.46"
	June 9	0.85"
	June 10	0.04"
	June 13	0.56"
	June 16	0.21"
	June 19	0.11"
	June 21	0.10"
	June 28	0.29"
	Total/June	2.62"
	July 1	0.08"
	July 9	0.06"
	July 11	0.29"
	July 12	0.04"
	July 17	0.02"
	July 19	0.15"
	July 22	0.02"
	July 25	0.02"
	Total/July	0.68"
	Total/August	1.55"
	Total/September	2.99"
Damage ratings:	July 31 & August 1	
Harvest date:	October 2 & 3	
Yield sample size:	2 center rows x 35 ft length (70 row-ft total)	

Location: Manvel (Grand Forks County), ND – Stuart Ferry Farm – *Wireworm Management Trial*

Seed variety: Betaseed 80RR52

Plot size: Two 25-ft long rows

Design: Randomized complete block, 4 replicates

Soil name: Bearden silty clay loam

Soil test: Organic matter = 8.0% pH = 7.5

Soil texture: 9.7% sand 58.6 % silt 31.8% clay

Previous crop: Wheat (2016)

Soil preparation: Heavy harrow with vibra-shank and packer (1x immediately before planting)

Planting depth: 1.25"

Planting date: June 20

Herbicides applied: June 26 Roundup PowerMAX (32 fl oz/ac) + Stinger (2 fl oz/ac) + AMS (1 lb)

Fungicides applied: July 18 Penncozeb (2 lbs) + Inspire XT (7 fl oz/ac) + Surfactant (3.2 fl oz/ac)
 Aug. 10 Topsin (16 fl oz/ac) + Supertin (8 fl oz/ac)
 Sept. 7 Priaxor (6.7 fl oz/ac) + Surfactant (3.2 fl oz/ac)

Rainfall: June 21 0.06"
 (after seedbed June 24 0.02"
 preparation): June 28 3.69"
Total/June **3.77"**
 July 1 0.06"
 July 4 0.19"
 July 9 0.03"
 July 11 0.52"
 July 17 0.13"
 July 20 0.02"
 July 22 0.03"
Total/July **0.98"**
Total/August **0.69"**
Total/September **4.21"**

Stand counts: June 30; July 7, 13, and 27

Harvest date: October 9

Yield sample size: 2 rows x 25 ft length (50 row-ft total)

Location: Prosper (Cass County), ND – NDSU Experiment Farm – *Springtail Management Trial*

Seed variety: Betaseed 80RR52

Plot size: Two 25-ft long rows

Design: Randomized complete block, 4 replications

Soil name: Bearden-Lindaas silty clay loam

Soil test: Organic matter = 3.4% pH = 7.1

Soil texture: 27.0% sand 46.5% silt 26.6% clay

Previous crop: Wheat (2016)

Soil preparation: Field cultivator (2x)

Planting depth: 1.25"

Planting date: May 19

Herbicides applied:

June 1	Roundup PowerMAX (32 fl oz/ac) + Class Act (1% v/v) + Interlock (12 fl oz/ac)
June 19	Roundup PowerMAX (32 fl oz/ac) + Class Act (1% v/v) + Interlock (4 fl oz/ac)
July 10	Roundup PowerMAX (32 fl oz/ac) + Class Act (1% v/v) + Interlock (4 fl oz/ac)

Fungicides applied:

June 6	Quadris (14.3 fl oz ac)
June 19	Quadris (14.3 fl oz ac)
July 21	Inspire XT (5.3 fl oz/ac) + Topsin (7.6 fl oz/ac)
Aug. 2	Super Tin (6 fl oz/ac) + Manzate (1.2 qt/ac)

Rainfall:

(after seedbed preparation):	May 20	0.38"
	May 23	0.03"
	May 27	0.07"
	May 28	0.03"
	May 29	0.03"
	Total/May	0.54"
	June 6	0.33"
	June 7	0.09"
	June 9	0.29"
	June 11	0.17"
	June 13	1.85"
	June 17	0.45"
	June 27	0.08"
	June 28	0.20"
	Total/June	3.46"
	July 4	0.63"
	July 6	0.23"
	July 9	0.04"
	July 18	0.47"
	July 21	0.16"
	July 22	0.15"
	July 31	0.29"

Total/July 1.97"
Total/August 2.07"
Total/September 0.22"

Stand counts: June 1, 15, and 29; July 7
Harvest date: September 18
Yield sample size: 2 rows x 25 ft length (50 row-ft total)

Location: Hillsboro (Traill County), ND – Glen Hultin Farm – *Small-plot Seed Lubricants Test*

Seed variety: Betaseed 83CN Mini Pellet & 83CN Pro200 Pellet

Plot size: Six 35-ft long rows, 4 center rows treated

Design: Randomized complete block, 4 replications

Soil name: Bearden–Perella silty clay loam

Soil test: Organic matter = 4.5% pH = 7.8

Soil texture: 9.1% sand 54.8% silt 36.2% clay

Previous crop: Wheat (2016)

Soil preparation: Harrow packer (1x)

Planting depth: 1.25"

Planting date: May 15

Herbicides applied: June 5 Roundup PowerMAX (32 fl oz/ac) + Veracity (3 qt/100 gal)
June 29 Roundup PowerMAX (22 fl oz/ac) + Veracity (3 qt/100 gal)

Fungicides applied: Aug. 10 Topsin (7.5 fl oz/ac) + Inspire XT (7 fl oz/ac)

Rainfall May 20 0.30"
(after seedbed May 21 0.06"
preparation): May 28 0.15"
Total/May **0.51"**
June 2 0.03"
June 7 0.14"
June 11 0.18"
June 13 0.84"
June 17 0.35"
June 19 0.04"
June 28 1.30"
Total/June **2.88"**
July 4 0.22"
July 5 0.10"
July 6 0.19"
July 11 0.34"
July 18 0.10"
July 21 0.12"
July 22 0.28"
July 31 0.23"
Total/July **1.58"**
Total/August **0.61"**
Total/September **0.66"**

Stand counts: June 1, 15, and 29

Harvest date: September 19

Yield sample size: 2 center rows x 35 ft length (70 row-ft total)

Location: Glyndon (Clay County), MN – David Watt Farm – *On-farm Seed Lubricants Test*

Seed variety: Betaseed 8572

Plot size: Twelve 600-ft long rows

Design: Randomized complete block, 4 replicates

Soil name: Glyndon loam

Soil test: Organic matter = 4.0% pH = 7.8

Soil texture: 11.1% sand 62.1% silt 26.9% clay

Previous crop: Wheat (2016)

Soil preparation: Field cultivator with packer (1x)

Planting depth: 1.25"

Planting date: May 1

Herbicide applied: May 19 Roundup PowerMAX (28 fl oz/ac) + Brawl (1 pt/ac)
 June 12 Roundup PowerMAX (28 fl oz/ac) + Brawl (1 pt/ac)

Fungicides applied: July 7 Inspire (7 fl oz/ac) + Manzate (1 qt/ac)
 July 29 Tin (8 fl oz/ac) + Topsin (10 fl oz/ac)
 Aug. 18 Proline (7 fl oz/ac)

Rainfall May 5 0.07"
 (after seedbed May 16 0.28"
 preparation): May 20 0.50"
 May 28 0.19"
 Total/May **1.04"**
 June 7 0.04"
 June 11 0.19"
 June 13 1.36"
 June 17 0.11"
 June 27 0.19"
 June 28 0.30"
 Total/June **2.26"**
 July 4 0.20"
 July 6 0.03"
 July 9 0.05"
 July 18 0.22"
 July 22 0.19"
 July 31 0.19"
 Total/July **0.89"**
 Total/August **2.29"**
 Total/September **2.75"**

Stand counts: May 24; June 1 and 22

Harvest date: Hand harvest – October 12
 Machine harvest – October 16

Yield sample size: Hand harvest – four 0.00025-ac samples per plot
 Machine harvest – twelve 50-ft long rows per plot