

Entomology Appendix: Agronomic Information for Research Sites

Location: St. Thomas, ND (Pembina County) – William and Brent Baldwin Farm

Sugarbeet Variety: Crystal 822, Van der Have 66240, and Beta 6600

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

Experimental Design: Randomized complete block, 4 replicates

Soil Name: Silty Loam

Soil Test: Organic Matter = 3.1%; pH = 7.5

Previous Crop: Wheat – 2003

Soil Preparation: Field cultivator worked once

Herbicide: Betamix (0.5 pt/A) + Upbeet (1/8 oz/A) + Select (2 fl oz/A) + MSO (1.5% v/v), June 4, 2004
 Betamix (0.5 pt/A) + Upbeet (1/8 oz/A) + Select (2 fl oz/A) + MSO (1.5% v/v), June 10, 2004
 Betamix (0.5 pt/A) + Upbeet (1/8 oz/A) + Stinger (1.3 fl oz/A) + Select (3 fl oz/A) + MSO (1.5% v/v), June 18, 2004

Fungicide: Eminent (12.8 oz/ac), July 25, 2004 and Headline (9.0 oz/ac), August 14, 2004

Insecticide: Noble applicators, granules; 5" band (B), modified in furrow (M), and spoon (S)
 Liquids; 3" band over open seed furrow (TB), directly in seed furrow (IF), 1" wide band to each side of row, (side-dress)
 Postemergence liquids; 7" & 11" band

Planting Depth: 1.25"

Planting Date: April 28, 2004 Replanting test (insecticide only)
 April 29, 2004 Registered Insecticide rate study
 May 05, 2004 Experimental Insecticide studies
 May 06, 2004 Vydate trial
 May 07, 2004 Experimental Seed treatments and liquid insecticide studies
 May 18, 2004 Replanting test

Post Treatments: June 16, 2004 Postemergence granule studies
 June 17, 2004 Postemergence liquids in Vydate trial (4-leaf)
 June 21, 2004 Lorsban 4E & Asana; Postemergence liquids
 Lorsban 4E; Experimental Seed treatment and liquid insecticides
 Lorsban 4E & Vydate; Vydate trial
 Vydate; Replanting test
 Lorsban 4E & Mustang (2-3 days pre-peak); Experimental Insecticides
 June 23, 2004 Vydate trial (6-leaf)
 July 01, 2004 Lorsban 4E & Asana; Postemergence liquids
 Lorsban 4E & Mustang (2-3 days post-peak); Experimentals

Rainfall:	May 08, 2004	0.03"
	May 11, 2004	1.23"
	May 12, 2004	0.13"
	May 15, 2004	0.18"
	May 19, 2004	0.22"
	May 24, 2004	0.39"
	May 29, 2004	0.53"
	May 30, 2004	0.83"
	May 31, 2004	0.03"
	Total/May	3.57"
	June 06, 2004	0.26"
	June 07, 2004	0.16"
	June 14, 2004	0.05"
	June 15, 2004	0.15"
	June 17, 2004	0.05"
	June 20, 2004	0.06"
	June 23, 2004	0.06"
	June 26, 2004	0.01"
	Total/June	0.80"
	July 02, 2004	0.75"
	July 03, 2004	0.66"
	July 06, 2004	0.17"
	July 08, 2004	0.40"
	July 12, 2004	0.21"
	July 15, 2004	0.07"
	July 18, 2004	0.48"
	July 20, 2004	0.09"
	July 21, 2004	0.19"
	July 22, 2004	0.13"
	July 27, 2004	0.31"
	Total/July	3.46"
	Total/August	3.92"
	Total/September	3.25"

Damage Ratings: August 11, 12, 16, 17, & 18, 2004
Harvest: September 27, & 28, 2004
Harvest Sample: 2 center rows x 35' long - 70' total

Location: Crookston (Polk County), MN
University of Minnesota Northwest Research & Outreach Center

Sugarbeet Variety: Beta 3820
Plot Size: Six 35-ft long rows, 4 center rows treated
Experimental Design: Randomized complete block, 4 replicates
Soil Name: Wheatville Loam
Previous Crop: Wheat - 2003
Soil Preparation: Alloway Seedbedder
Herbicide: Betamix (0.5 pt/A) + Upbeet (1/8 oz/A) + Stinger (1.3 fl oz/A) + Select (2 fl oz/A) + MSO (1 1/4 pt/A), June 14, 2004
Betamix (0.5 pt/A) + Upbeet (1/8 oz/A) + Stinger (1.3 fl oz/A) + Select (2 fl oz/A) + MSO (1 1/2 pt/A), June 21, 2004
Betamix (0.5 pt/A) + Upbeet (1/8 oz/A) + Stinger (1.3 fl oz/A) + Select (2 fl oz/A) + MSO (1 1/2 pt/A), June 29, 2004
Fungicide: Eminent (13 oz/ac), August 12, 2004
Headline (9 oz/ac), September 1, 2004
Insecticide: Noble applicators, granules; banded (B) 5" band, modified in-furrow (M), and spoon (S)
Planting Depth: 1 1/2"
Planting Date: May 18, 2004 Registered Experiment

Rainfall:	May 19, 2004	0.90"
	May 22, 2004	0.07"
	May 24, 2004	0.45"
	May 29, 2004	2.01"
	May 30, 2004	0.87"
	May 31, 2004	0.06"
	Total/May	4.36"
	June 05, 2004	0.33"
	June 07, 2004	0.20"
	June 08, 2004	0.10"
	June 11, 2004	0.24"
	June 15, 2004	0.08"
	June 17, 2004	0.20"
	June 23, 2004	0.16"
	June 24, 2004	0.08"
	Total/June	1.39"
	July 02, 2004	1.60"
	July 03, 2004	0.23"
	July 05, 2004	0.32"
	July 06, 2004	0.50"
	July 10, 2004	0.60"
	July 12, 2004	0.16"
	July 15, 2004	0.05"
	July 18, 2004	0.04"
	July 28, 2004	0.37"
	Total/July	3.87"
	Total/August	4.82"
	Total/September	3.45"

Damage Ratings: August 12, 2004
Harvest: September 29, 2004
Harvest Sample: 2 center rows x 35' long - 70' total

Location: Kindred (Cass County), ND – Larry Bakko Farm

Sugarbeet Variety: Crystal 822
Plot Size: Two 35-ft long rows
Experimental Design: Randomized complete block, 4 replicates
Soil Name: Fargo Clay
Soil Test: pH = 7.8
Previous Crop: Wheat - 2003
Soil Preparation: Field cultivator worked once
Herbicide: Betamix (0.5 pt/A) + Upbeet (1/8 oz/A) + Select (2 fl oz/A) + Stinger (1.3 fl oz/A) + MSO (1.5% v/v), June 4, 2004
Progress (0.4 pt/A) + Upbeet (1/8 oz/A) + Select (2 fl oz/A) + MSO (1.5% v/v), June 10, 2004
Insecticide: Noble applicators, granules; 5" band (B), modified in furrow (M), and spoon (S) Liquids; 3" band over open seed furrow (TB), directly in seed furrow (IF) Postemergence liquids, 7" band
Planting Depth: 1.25"
Planting Date: May 20, 2004 Experimental Seed Treatments and Liquids
May 21, 2004 Liquid and Granular Insecticides
Granular Insecticides
Post Treatments: June 25, 2004 Mustang; Experimental Seed Treatments and Liquids
Rainfall: May 22, 2004 0.04"
May 24, 2004 0.26"
May 29, 2004 0.49"
May 30, 2004 1.49"
May 31, 2004 1.02"
Total/May 3.30"
June 01, 2004 0.06"
June 04, 2004 0.30"
June 08, 2004 0.03"
June 11, 2004 0.03"
June 12, 2004 0.06"
June 15, 2004 0.17"
June 22, 2004 0.13"
June 23, 2004 0.03"
June 26, 2004 0.03"
June 27, 2004 0.12"
Total/June 0.96"
July 03, 2004 0.75"
July 05, 2004 0.66"
July 06, 2004 0.17"
July 08, 2004 0.40"
July 10, 2004 0.21"
July 12, 2004 0.07"
July 18, 2004 0.48"
July 28, 2004 0.09"
Total/July 2.83"
Total/August 1.74"
Total/September 3.44"
Stand Count: June 10, July 1, & Oct. 4, 2004
Harvest: October 4, 2004
Harvest Sample: 2 rows x 35' long - 70' total

Location: Felton (Clay County), MN – Dan Murphy Farm

Sugarbeet Variety: Crystal 822
Plot Size: Two 35-ft long rows
Experimental Design: Randomized complete block, 4 replicates
Soil Name: Ulen Fine Sandy Loam
Soil Test: Organic Matter = 3.5%; pH = 8.6
Previous Crop: Wheat - 2003
Soil Preparation: Field cultivator worked once
Herbicide: Betamix (0.5 pt/A) + Upbeet (1/8 oz/A) + Select (2 fl oz/A) + Stinger (1.3 fl oz/A) + MSO (1.5% v/v), June 4, 2004
Progress (0.4 pt/A) + Upbeet (1/8 oz/A) + Select (2 fl oz/A) + MSO (1.5% v/v), June 10, 2004
Betamix (0.5 pt/A) + Upbeet (1/8 oz/A) + Select (2 fl oz/A) + MSO (1.5% v/v), June 24, 2004
Insecticide: Noble applicators, granules; 5" band (B), modified in furrow (M), and spoon (S) Liquids; 3" band over open seed furrow (TB), directly in seed furrow (IF), Liquid metering device – Raven
Postemergence liquids, 7" band, CO²-driven
Planting Depth: 1.25"
Planting Date: May 24, 2004 Experimental Seed Treatments and Liquids
May 26, 2004 Liquid and Granular Insecticides
Granular Insecticides
Post Treatments: June 24, 2004 Mustang; Experimental Seed Treatments and Liquids
Rainfall:
May 24, 2004 0.23"
May 25, 2004 0.01"
May 29, 2004 0.74"
May 30, 2004 1.75"
May 31, 2004 0.65"
Total/May 3.38"
June 01, 2004 0.07"
June 11, 2004 0.07"
June 15, 2004 0.09"
June 21, 2004 0.02"
June 22, 2004 0.01"
June 23, 2004 0.25"
Total/June 0.51"
July 02, 2004 0.06"
July 03, 2004 0.56"
July 05, 2004 0.29"
July 06, 2004 0.57"
July 10, 2004 1.08"
July 12, 2004 0.22"
July 28, 2004 0.49"
Total/July 3.27"
Total/August 2.77"
Total/September 2.85"
Stand Count: June 10, July 1, 27 & Sept. 30, 2004
Harvest: September 30, 2004
Harvest Sample: 2 rows x 35' long - 70' total

Location: **Raymond (Edwards County), MN – Steven Freese Farm**

Sugarbeet Variety: Crystal 822
Plot Size: Two 35-ft long rows
Experimental Design: Randomized complete block, 4 replicates
Soil Test: Organic Matter = 4.0%; pH = 8.1
Previous Crop: Wheat - 2003
Soil Preparation: Field cultivator worked once
Herbicide:
Insecticide: Noble applicators, granules; modified in furrow (M)
Liquids; 3" band over open seed furrow (TB), directly in seed furrow (IF)
Liquid metering device – Raven
Planting Depth: 1.25"
Planting Date: June 03, 2004 Secondary Pest Study
Stand Count: June 24 & July 19, 2004
Harvest: September 13, 2004
Harvest Sample: 2 rows x 35' long - 70' total

Visit the North Dakota Agricultural Weather Network (NDAWN) at: <http://ndawn.ndsu.nodak.edu/>
for more detailed weather information.

Nearest NDAWN weather stations to research sites:

St. Thomas – St. Thomas

Kindred – Leonard

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