

Sugarbeet Early Pest Detection Survey – Update

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Amanda Tracey, Vegetable Crop Specialist, OMAFRA, Ridgetown

Cheryl Trueman, Ph.D, College Professor, Vegetable Pathology & Entomology,
Ridgetown Campus, University of Guelph

Katie Goldenhar, Pathologist – Horticulture, OMAFRA, Guelph

In 2021, the Sugarbeet Early Pest Detection Survey was resumed after a 5-year break. To monitor for Rhizomania, soil was collected from 48 sugarbeet fields by taking 30 random, 12-inch core samples from across the field in September 2021. A susceptible red beet variety was grown in the collected soil samples in the University of Guelph – Ridgetown Campus greenhouse for 8-10 weeks. Fresh root tissue was collected, washed and packaged for testing. Soil used as a positive control was collected from a table beet field in the Holland Marsh that had known presence of rhizomania in 2020. Commercial potting soil was used as a negative control.

To monitor for Sugarbeet Cyst Nematode, tare dirt was collected from 47 site locations where sugarbeets were piled after harvest.

Results

The results from the Rhizomania samples were received in late December 2021, as shown in Table 1. Both the positive and negative control samples tested negative for Rhizomania, while one sample collection site (151) tested positive. These results were unexpected, and the laboratory ran the samples a second time for confirmation. The results of the second test came back the same.

Table 1: 2021 Rhizomania Sample Results (PC = positive control, NC=negative control, - = negative result, + = positive result)

Rhizomania Sample ID	Sample Date	Result (+/-)	Rhizomania Sample ID	Sample Date	Result (+/-)
SB2021-RZ-001	Sept.9.21	-	SB2021-RZ-096	Sept. 15.21	-
SB2021-RZ-015	Sept.14.21	-	SB2021-RZ-102	Sept.16.21	-
SB2021-RZ-016	Sept. 30.21	-	SB2021-RZ-103	Sept. 30.21	-
SB2021-RZ-017	Sept. 30.21	-	SB2021-RZ-105	Sept.16.21	-
SB2021-RZ-020	Sept. 20.21	-	SB2021-RZ-128	Sept. 30.21	-
SB2021-RZ-028	Sept.16.21	-	SB2021-RZ-133	Sept.16.21	-
SB2021-RZ-031	Sept. 30.21	-	SB2021-RZ-137	Sept.16.21	-
SB2021-RZ-037	Sept. 21.21	-	SB2021-RZ-139	Sept. 29.21	-

SB2021-RZ-038	Sept. 14.21	-	SB2021-RZ-140	Sept. 20.21	-
SB2021-RZ-040	Sept. 21.21	-	SB2021-RZ-142	Sept. 29.21	-
SB2021-RZ-041	Sept. 21.21	-	SB2021-RZ-143	Sept. 20.21	-
SB2021-RZ-042	Sept. 14.21	-	SB2021-RZ-144	Sept. 29.21	-
SB2021-RZ-043	Sept. 14.21	-	SB2021-RZ-146	Sept. 20.21	-
SB2021-RZ-046	Sept. 14.21	-	SB2021-RZ-150	Sept. 29.21	-
SB2021-RZ-047	Sept. 23.21	-	SB2021-RZ-151	Sept. 29.21	+
SB2021-RZ-048	Sept. 23.21	-	SB2021-RZ-168	Sept. 20.21	-
SB2021-RZ-049	Sept. 23.21	-	SB2021-RZ-169	Sept. 20.21	-
SB2021-RZ-050	Sept. 23.21	-	SB2021-RZ-171	Sept. 29.21	-
SB2021-RZ-052	Sept. 30.21	-	SB2021-RZ-172	Sept. 29.21	-
SB2021-RZ-056	Sept. 30.21	-	SB2021-RZ-179	Sept. 29.21	-
SB2021-RZ-060	Sept. 16.21	-	SB2021-RZ-190	Sept. 29.21	-
SB2021-RZ-064	Sept. 23.21	-	SB2021-RZ-192	Sept. 29.21	-
SB2021-RZ-066	Sept. 16.21	-	SB2021-RZ-194	Sept. 29.21	-
SB2021-RZ-076	Sept. 16.21	-	SB2021-RZ-PC		-
SB2021-RZ-092	Sept. 30.21	-	SB2021-RZ-NC		-

The results for the nematode soil samples were received in early February 2022. All of the samples submitted tested negative for Sugarbeet cyst nematode (Table 2), except one sample (SB2021-NM-043) which was submitted but no results were recorded from the laboratory. Of the 47 samples submitted 37 tested positive for Soybean cyst nematode, which may be of interest to growers.

Table 2: 2021 Nematode Sample Results (- = negative result, + = positive result)

Nematode Sample ID	Sample Date	Sugarbeet Cyst Nematode Result (+/-)	Soybean Cyst Nematode Results (+/-)	Nematode Sample ID	Sample Date	Sugarbeet Cyst Nematode Result (+/-)	Soybean Cyst Nematode Results (+/-)
SB2021-NM-001	Oct. 5. 21	-	+	SB2021-NM-092	Nov. 17. 21	-	+
SB2021-NM-015	Sept. 14. 21	-	+	SB2021-NM-096	Nov. 5. 21	-	-
SB2021-NM-016	Nov. 17. 21	-	+	SB2021-NM-102	Nov. 5. 21	-	+
SB2021-NM-017	Oct. 5. 21	-	+	SB2021-NM-103	Nov. 17. 21	-	-
SB2021-NM-020	Nov. 5. 21	-	+	SB2021-NM-105	Oct. 5. 21	-	+
SB2021-NM-026	Nov. 17. 21	-	+	SB2021-NM-128	Nov. 5. 21	-	+
SB2021-NM-027	Nov. 5. 21	-	+	SB2021-NM-133	Nov. 5. 21	-	-
SB2021-NM-031	Nov. 5. 21	-	+	SB2021-NM-137	Oct. 5. 21	-	+
SB2021-NM-037	Nov. 17. 21	-	+	SB2021-NM-139	Nov. 5. 21	-	-
SB2021-NM-038	Nov. 17. 21	-	+	SB2021-NM-140	Dec. 2. 21	-	+

SB2021-NM-041	Nov. 17. 21	-	+	SB2021-NM-142	Nov. 5. 21	-	-
SB2021-NM-042	Nov. 17. 21	-	+	SB2021-NM-143	Oct. 13. 21	-	-
SB2021-NM-043	Oct. 5. 21	n/a	n/a	SB2021-NM-144	Nov. 11.21	-	+
SB2021-NM-046	Nov. 17. 21	-	+	SB2021-NM-146	Nov. 23. 21	-	+
SB2021-NM-047	Nov. 17. 21	-	+	SB2021-NM-150	Nov. 11.21	-	-
SB2021-NM-049	Nov. 5. 21	-	+	SB2021-NM-151	Nov. 11.21	-	+
SB2021-NM-050	Nov. 17. 21	-	+	SB2021-NM-168	Oct. 13. 21	-	+
SB2021-NM-052	Nov. 17. 21	-	+	SB2021-NM-169	Oct. 13. 21	-	+
SB2021-NM-056	Nov. 17. 21	-	+	SB2021-NM-172	Nov. 5. 21	-	+
SB2021-NM-057	Nov. 17. 21	-	+	SB2021-NM-179	Nov. 11.21	-	+
SB2021-NM-060	Nov. 17. 21	-	+	SB2021-NM-190	Nov. 5. 21	-	-
SB2021-NM-064	Nov. 17. 21	-	+	SB-2021-NM-194	Nov. 23. 21	-	-
SB2021-NM-066	Oct. 5. 21	-	+				
SB2021-NM-076	Nov. 5. 21	-	+				
SB2021-NM-088	Nov. 30. 21	-	+				

Next Steps:

Since the Rhizomania results appear highly unusual, another sample will be collected from site 151 in the spring. The sample will be used to grow susceptible beets, which will be submitted to the lab for testing. The grower has also been contacted and directed to take precautions including, 1. Not planting sugarbeets in close proximity to the site location, 2. Washing equipment that was used on the site and 3. Limiting access to and soil movement from the site as best as possible.

A final report will be submitted once the results for Sugarbeet Cyst Nematode and the spring Rhizomania sample from site 151 have been received and analyzed.