

THE SUGAR BEET INDUSTRY IS SEEKING NEW SOLUTIONS!

The sugar beet industry is under threat from many production challenges, with losses totaling over **\$2.2 billion** with current management practices.

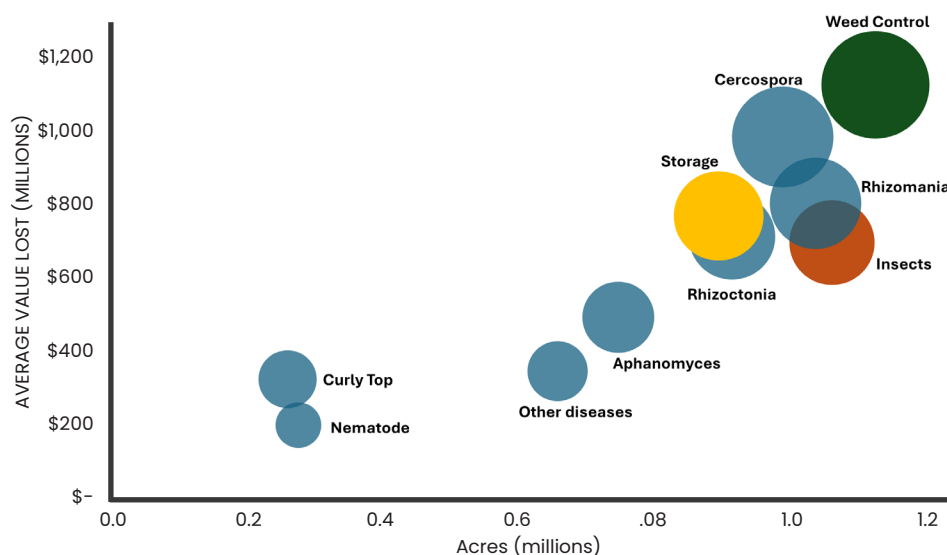
Overview of U.S. Sugar Beet Growing Regions

Sugar beets are grown on **1.1 million** acres in the U.S. across **11 states** and provide **55%** of domestically produced sugar (Figure 1).



Productivity of sugar beet acres is constrained by abiotic stresses associated with weather extremes and climate change that cause approximately **\$1.6 billion** in losses without current management practices. Further economic losses of close to **\$1 billion** are caused by sugar beet **pest insects, diseases, and weeds** under current management practices. Combined with regulatory pressures on many of the most effective practices (such as insecticidal and fungicidal seed treatments, and in-season applications of pesticides) and emergence of pesticide resistance, the opportunity continues to grow for new technologies and innovative solutions.

Figure 2
Impact of Sugar Beet Production Challenges Without Current Management Practices



For detailed information on current and past production challenges surveys, click [here](#).

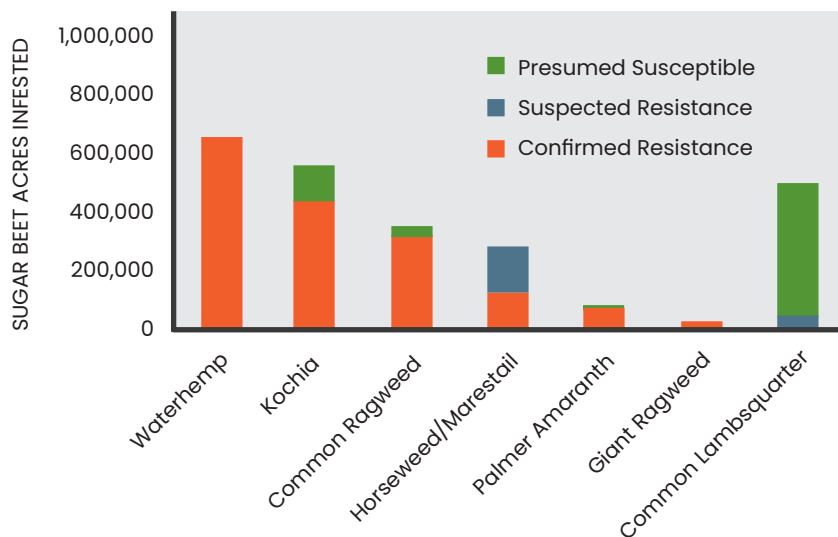
Figure 3
2023 Beet Sugar Development Foundation Production Challenges Survey

	TOTAL AVERAGE VALUE LOST PER PRODUCTION CHALLENGE		TOTAL CHALLENGED ACRES	
	Without Management	With Management	Without Management	With Management
Abiotic - Total	\$ 1,598,509,044	\$ 967,550,944	2,887,795	2,450,284
Drought Stress	\$ 492,190,736	\$ 259,340,736	780,396	608,396
Heat Stress	\$ 430,811,836	\$ 289,930,736	788,107	661,896
Frost	\$ 370,990,736	\$ 213,400,736	632,396	535,396
Excess Water	\$ 295,765,736	\$ 199,578,736	641,896	601,596
Salt	\$ 8,750,000	\$ 5,300,000	45,000	43,000
Disease - Total	\$ 3,878,917,754	\$ 490,462,982	4,918,534	1,616,176
Cercospora	\$ 986,445,000	\$ 147,343,088	992,396	573,896
Rhizomania	\$ 805,729,692	\$ 32,407,150	1,040,396	108,550
Rhizoctonia	\$ 715,338,736	\$ 150,324,704	918,396	444,069
Aphanomyces	\$ 495,492,376	\$ 122,120,880	751,936	327,430
Curly Top	\$ 326,060,000	\$ 187,500	268,200	5,000
Nematode	\$ 201,300,000	\$ 3,000,000	284,000	13,000
Alternaria	\$ 184,086,950	\$ 2,109,000	299,010	34,000
Fusarium	\$ 134,215,000	\$ 31,770,660	211,200	88,231
Powdery Mildew	\$ 30,250,000	\$ 1,200,000	153,000	22,000
Insect - Total	\$ 698,935,189	\$ 117,036,988	1,064,439	344,359
Aphids (Root & Black Bean)	\$ 257,322,050	\$ 33,438,360	368,190	94,551
Lygus	\$ 16,125,000	\$ 400,000	147,500	16,000
Root Maggot	\$ 399,688,139	\$ 83,073,628	471,749	231,308
Wireworm	\$ 25,800,000	\$ 125,000	77,000	2,500
Other - Total	\$ 1,899,844,206	\$ 657,957,800	2,026,951	1,473,144
Storage	\$ 771,375,000	\$ 365,333,000	898,844	745,844
Weed Control	\$ 1,128,469,206	\$ 292,624,800	1,128,107	727,300
Grand Total	\$ 8,076,206,193	\$ 2,233,008,714	10,897,719	5,883,963

Average value calculated based on each cooperative's average ton/acre and average payment/ton. This, as well as past surveys can be found [here](#).

Figure 4
Sugar Beet Acres Infested with Known and Suspected Glyphosate Resistant Weeds in 2023

Data provided by eight sugar beet grower cooperatives. For context, the y-axis height is the total sugar beet acres (1.1 M)



U.S. Sugar Beet Industry At A Glance

- 155,000 people employed across 22 states
- \$23 billion in economic impact in the U.S.
- 8th most valuable crop
- 1.1 million acres
- 2x value per acre than corn or soybean
- New Technology is readily adapted by growers the U.S.

We would like to discuss future research opportunities to address sugar beet industry needs!

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BEET SUGAR DEVELOPMENT FOUNDATION

