

**Table 15.** Field performance of **EXPERIMENTAL TRANSGENIC** sugarbeet varieties resistant to Roundup herbicide in the Amalgamated Sugar Co. LLC Variety Trial at the **KIMBERLY RESEARCH and EXTENSION CENTER, KIMBERLY, Idaho, 2003**

VARIETY	Root <sup>1</sup> Yield (T/A)	Sugar Content (%)	Gross Sugar (lbs/A)	Estimated Recoverable Sugar			Curly Top Rating 2003
				(%)	(lbs/T)	(lbs/A)	
<b>ACH Seeds</b>							
Crystal 217R <sup>2</sup>	43.26	16.27	14079	14.57	291.4	12613 ab <sup>Z</sup>	5.4
Crystal 399RR <sup>3</sup>	40.01	16.50	13207	14.78	295.7	11830 bcd	5.0
<b>Betaseed</b>							
Beta 4490R <sup>2</sup>	42.20	15.18	12813	13.49	269.9	11386 d	4.8
Beta G1057RR <sup>3</sup>	42.18	16.46	13891	14.75	295.0	12449 ab	5.2
Beta G9104RR <sup>3</sup>	40.12	17.06	13689	15.39	307.8	12344 ab	6.0
Beta G9236RR <sup>3,4</sup>	41.18	16.46	13557	14.73	294.6	12132 bcd	6.3
<b>Hilleshog/Syngenta</b>							
HM 2986RZ <sup>2</sup>	41.50	16.26	13494	14.56	291.2	12081 bcd	4.2
HM 108RR <sup>3</sup>	44.14	15.95	14097	14.22	284.4	12564 ab	5.2
HM 115RZRR <sup>3,4</sup>	42.05	15.56	13099	13.70	274.0	11533 cd	5.3
HM 125RZRR <sup>3,4</sup>	41.26	15.50	12781	13.84	276.7	11410 d	5.6
HM OasisRR <sup>3</sup>	41.25	16.44	13566	14.91	298.2	12308 abc	4.8
<b>Seedex</b>							
SX RaptorRZ <sup>2</sup>	45.21	16.02	14485	14.36	287.3	12986 a	5.7
Curly Top Susceptible Check							6.8
Curly Top Resistant Check (US 41)							5.1
LSD (0.05)	1.99	0.46	810	0.55	10.9	785	
LSD (0.10)	1.66	0.39	677	0.46	9.1	657	
CV (%)	4.7	2.8	5.9	3.8	3.8	6.4	
Pr>F	0.0001	0.0001	0.0009	0.0001	0.0001	0.0009	

When comparing yields or sugars of two varieties, the values must differ by a value equal to or greater than the LSD (0.05) given at the bottom of each column to be considered statistically different in this test.

<sup>Z</sup>Means followed by the same letter are not significantly different at  $P \leq 0.05$ .

<sup>1</sup> Root yields have been tared 5%.

<sup>2</sup> Standard Commercial rhizomania resistant check varieties.

<sup>3</sup> Entered as a Roundup Ready variety.

<sup>4</sup> Entered as a rhizomania resistant variety.

#### Cultural Practices

Planted April 23, 2003; Harvested October 14, 2003.

Previous crop was wheat; fall soil test showed 18 ppm N & 4 ppm P; fall applied 340 lbs of 11-52-0 and 156 lbs of 0-0-50 per acre - disked in; spring bedded; 28 April band applied 9.8 lb/A Counter 20 CR; 9 June band applied 14 lb/A Temik 15G; 50 units N applied in the irrigation water on 19 June and 25 June.

Standard Check varieties treated as follows - broadcast applied Progress on 14th, 21st, and 28th of May at 1.5, 2.0, and 2.25 pts/A, respectively; Assure II broadcast at 12 oz/A on 17 June.

Roundup Ready varieties broadcast sprayed with 20 oz/A Roundup Ultra on 22 May and 17 June.