

Abstract

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Every spring a decision must be made concerning time of planting. There is much discussion about the advantages and disadvantages of being the first grower to plant. Planting dates for some growers are considerably later than for others. Planting later offers less potential for top production than earlier planting. This test was designed to plant beets four different dates, each 7 - 10 days apart, with the first planting as early as possible. Populations of 110 and 150 beets per 100 feet were also included. The results indicate an advantage to earlier planting and thicker populations.

Method

All fertilizer was broadcast before planting the first date, using an ammoniated complete fertilizer. At each planting date, three strips were tilled twice, planted, and broadcast preemergence herbicide was sprayed using a tank mix of pyramin, antor, and nortron. The seed was planted at a 1.3 inch spacing. Each planting date was thinned at a time when the beets were an appropriate size. The test was planted in a 28 inch row width and populations of 110 and 150 beets per 100 feet equaled 20,535 and 30,803 beets per acre. All planting dates were harvested the same day. The planting and harvest dates are listed below.

<u>Year</u>	<u>Planting Dates</u>				<u>Harvest Date</u>
1989	4/21	4/28	5/8	5/15	10/3
1990	4/19	4/26	5/3	5/14	10/22

On the attached sheets, Table 1-3, are the complete numbers for both planting date and population.

Summary

There is not a significant difference in RWSA on either planting date or population, but there are some noticeable differences. In Table 1, there is a large difference in percent emergence and because of thinning this factor did not affect harvest results. The RWSA does show an advantage to earlier planting.

The secondary part of this test, population, is summarized in Table 3. This shows small advantages to the higher population. In convincing our growers to plant thicker these results are significant. Many farmers have feared lower yield if they get the beets "too thick". This test and others that have been conducted, conclude that thicker beets are beneficial.

In another test, a comparison of 60, 80, 100, 120, 140 and 160 beets per 100 feet of row was tested. Results did show a significant advantage to thicker beets and RWSA did increase up through 160 beets.

TABLE 1

MONITOR SUGAR COMPANY
 TEST: PLANTING DATE
 LOCATION: BAY CITY, MI
 AVERAGE OF TWO YEARS

DATE	RWSA	% SUGAR	RWST	TON/A	% CJP	AMINO N	BEETS/ 100' AT HARVEST	(1) % EMERG
DATE 1	6181	18.81	282.9	21.85	95.69	5.25	120	52.0
DATE 2	6076	18.80	282.8	21.46	95.73	5.66	120	48.4
DATE 3	5962	18.72	278.0	21.47	95.10	7.09	116	48.4
DATE 4	5683	18.69	278.7	20.41	95.30	6.42	117	35.4
GM	5975	18.75	280.6	21.30	95.45	6.10	118	46.1
LSD (5%)	N/S	N/S	4.34	N/S	.37	.71	N/S	

Replications: 9 Rows: 8 Row Length: 30' Row Width: 28"

(1) Percentage of plants before thinning compared to seeds planted.

TABLE 2

MONITOR SUGAR COMPANY
 TEST: PLANTING DATE
 LOCATION: BAY CITY, MI
 AVERAGE OF TWO YEARS: 1989-1990

DATE & STAND	RWSA	% SUGAR	RWST	TON/A	% CJP	AMINO N	BEETS/ 100' AT HARVEST
DATE 1 150 BEETS	6340	18.83	283.8	22.33	95.81	4.84	133
DATE 1 110 BEETS	6021	18.80	282.0	21.37	95.58	5.66	108
DATE 2 150 BEETS	6225	18.90	285.4	21.79	95.89	5.37	134
DATE 2 110 BEETS	5928	18.69	280.2	21.14	95.56	5.94	106
DATE 3 150 BEETS	5958	18.80	280.2	21.33	95.24	6.69	126
DATE 3 110 BEETS	5966	18.63	275.8	21.61	94.95	7.48	107
DATE 4 150 BEETS	5788	18.58	277.5	20.91	95.39	6.44	129
DATE 4 110 BEETS	5578	18.79	279.9	19.90	95.20	6.40	106
GM	5975	18.75	280.6	21.30	95.45	6.10	118
LSD (5%)	N/S	N/S	6.10	N/S	.53	.99	

Replications: 9 Rows: 8 Row Length: 30' Row Width: 28"

TABLE 3

MONITOR SUGAR COMPANY
 TEST: PLANTING DATE
 LOCATION: BAY CITY, MI
 AVERAGE OF TWO YEARS: 1989-1990

STAND	RWSA	% SUGAR	RWST	TON/A	% CJP	AMINO N	BEETS/ 100' AT HARVEST
150 BEETS	6078	18.78	281.7	21.59	95.58	5.84	130
110 BEETS	5873	18.73	279.5	21.01	95.32	6.37	107
GM	5975	18.75	280.6	21.30	95.45	6.10	118

Replications: 9 Rows: 8 Row Length: 30' Row Width: 28"