

Beet Variety Trial

Spring 2005, Caddo County, Oklahoma
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Materials and Methods: During the spring of 2005 a beet variety trial was conducted to determine the potential of 6 different beet cultivars for commercial production in Oklahoma. The trial was direct seeded on 3/23/05 using a research cone-planter with rows 18 inches apart at a seeding rate of approximately 15 seeds per foot. Each plot consisted of 2 rows 20 feet long, plots were replicated 4 times in a randomized block design. Plots were fertilized with a total of 87 lbs of N, 52 lbs of P, 180 lbs of K, and 60 lbs of S per acre spread over three applications. Yield and quality data (amount of interior root zoning) were recorded at harvest from one meter of row per plot on 6/21/05.

Results and Discussion: No differences were observed for yield of table beets in this trial (Table 1). Yields were 13.7, 13.9, 16.5, 14.0, 17.2, and 15.7 tons/acre for Cylindra Long Red, Detroit Dark Red, Early Wonder, Red Ace, Ruby Queen, and Warrior, respectively. Average root weight ranged from a low of 1.1 oz for Cylindra Long Red to 1.7oz for Ruby Queen, respectively. Red Ace, Ruby Queen and Warrior had significantly lower amounts of interior root zoning than Early Wonder. These three cultivars had interior zoning ratings of 1.1, 2.1, and 1.9, respectively.

Conclusions: The main objective of this trial was to determine the potential that table beet cultivars would have for production in Oklahoma. A secondary objective was to demonstrate if table beets would be a viable crop for the state. The authors feel that both objectives were met, and that table beets can be produced in Oklahoma for use by the food processing industry. Of the cultivars tested, Red Ace appears to have the highest quality root with low levels of zoning. Based upon the results of this trial the authors would recommend further testing of Red Ace, Ruby Queen, and Warrior cultivars.

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Table 1. Spring Beet Variety Trial. Caddo County, Oklahoma.

Variety	Seed company	Yield tons/acre ^z	Average size root (oz.)	Zoning ^y
Cylindra Long Red	Chesmore	13.7 a ^x	1.1 a	2.4 ab
Detroit Dark Red	Willhite	13.9 a	1.6 a	2.4 ab
Early Wonder	Dewitt	16.5 a	1.5 a	3.6 a
Red Ace	Dewitt	14.0 a	1.2 a	1.1 b
Ruby Queen	Dewitt	17.2 a	1.7 a	2.1 b
Warrior	Chesmore	15.7 a	1.2 a	1.9 b

^z Yield=tons per acre, harvested on June 21, 2005.

^y Zoning=scale 1-5, 5 being most evident differences in color between the xylem and phloem of the root (largest differences in color), 1=small or no differences.

^x Numbers in a column followed by the same letter exhibited no significant differences based on Duncan's Multiple Range Test where P=0.05.