

Romaine Lettuce Cultivar Trial

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Introduction

Although romaine lettuce is not currently grown on a commercial scale in Kentucky, high fuel costs have sparked an interest in romaine lettuce production east of the Mississippi River to lessen transportation costs to Eastern U.S. markets. Romaine lettuce production could be an early/short season crop for Kentucky growers looking to extend their growing season. This trial is intended to look at some of the varieties that are currently being grown in our region to determine which, if any, of these cultivars perform best for our area.

Materials and Methods

The trial was conducted at the University of Kentucky Horticulture Research Farm. The seed of 17 romaine lettuce cultivars and one green leaf cultivar were seeded in the greenhouse in 98 cell size trays on February 27, 2008. Plants were transplanted to the field on April 4, in a randomized complete block design with four replications. Plants were transplanted into raised beds with black plastic mulch and trickle irrigation. Each cultivar in each replication had 20 plants in 15-inch-wide rows with 12 inches between plants within the rows. The plot received a preplant application of 50 lb/A of N, 50 lb/A P₂O₅, and 50 lb/A K₂O as indicated by soil samples. An additional 30 lb/A of N was applied through the trickle irrigation during the growing season. The plot was scouted regularly for diseases and insects and sprays applied accordingly. The plot was harvested on June 5. Ten plants from each cultivar and each replication were harvested and evaluated for color, leaf texture, plant frame, head weight, head length, core length, and overall rating. The green leaf cultivar BOS9115-GLX was planted for observation purposes only and proved to be a very acceptable green leaf lettuce cultivar.

Results and Discussion

Color, leaf texture, and plant frame were consistent within the cultivar in each replication (Table 1). The color of each cultivar was essentially the same except for Jericho, which was a yellowish green, and Ideal, which was a noticeably lighter green. Plant frame for the different cultivars was nearly indistinguishable except for Jericho, which was noticeably taller. The leaf texture of most cultivars tended to be crinkled and savoy in appearance except for the cultivar Ideal, which was smoother and noticeably less savoy in texture.

With the exception of the color of Jericho, all the cultivars were acceptable for color, plant frame, and leaf texture. Other characteristics of commercially acceptable Romaine lettuce cultivars are head weights of about 1.5 pounds, head height or length of 10 to 12 inches, and a core length of less than 3.5 inches. Based on these characteristics, PIC 714, Green Forest, Ideal, and Green Towers were the highest rated cultivars.

Weather conditions this spring were near normal as opposed to last spring when record cold temperatures in early April were followed by near record high temperatures in late April and most of May. With more normal weather conditions this spring, the results of this study should be more indicative of the plant characteristics of the cultivars being examined.

Table 1. Average head weight, height, core length, and overall evaluation of romaine lettuce cultivars¹.

Cultivar	Avg. Weight (pounds) ²		Avg. Height (inches) ³		Avg. Core Length (inches) ⁴		Overall Evaluation of Cultivars ⁵	
Jericho	2.37	a	14.8	a	3.8	ab	4.0	b
Plato II	2.34	ab	12.3	f	3.9	a	4.4	ab
Costal Star	2.26	abc	13.7	bc	3.5	abc	4.7	a
BOS 9021-G	2.14	abc	13.0	cde	3.2	abcd	4.7	a
Green Forest	2.07	abc	13.2	cd	2.8	cde	4.9	a
EXP T12	2.03	abcd	12.7	def	2.8	de	4.6	a
Green Towers	2.00	abcd	12.6	def	2.8	cde	4.9	a
Rubicon	1.98	abcd	12.5	ef	2.7	de	4.6	a
Torrento	1.97	abcd	12.4	ef	2.8	cde	4.7	a
PIC 714	1.89	bcd	12.5	f	2.7	de	4.9	a
Ideal	1.87	cd	14.0	b	3.1	bcd	4.9	a
Fresh Heart	1.85	cd	12.6	def	3.1	bcd	4.5	ab
Paris Island	1.84	cd	12.2	f	2.6	de	4.4	ab
Nautilus	1.83	cd	12.6	def	2.7	de	4.7	a
Mirella	1.82	cd	12.6	def	2.8	cde	4.5	ab
Paragon PIC	1.80	cd	12.3	f	2.5	de	4.4	a
PIC-A	1.60	c	12.1	f	2.2	e	4.5	ab

¹Treatments followed by different letters are statistically different with $P < 0.05$.

²Weight is for the whole cut plant.

³Head height was measured from the cut base to the tip of the leaves.

⁴Core length was measured from the cut base to the apex of the growth point.

⁵The overall rating was a composite of rating factors and general appearance.