

*The  
Connecticut  
Agricultural  
Experiment  
Station,  
New Haven*

**Butternut Squash  
Trials  
2017-2019**

Abigail A. Maynard, Ph.D. and  
Jeffrey S. Ward, Ph.D.  
Department of Forestry and Horticulture



*Bulletin 1077  
August 2021*

# Butternut Squash Trials 2017-2019

Abigail A. Maynard, Ph.D. and Jeffrey S. Ward, Ph.D.

Department of Forestry and Horticulture

## ABSTRACT

In 2017-2019, ten cultivars of butternut squash were evaluated for yield and fruit characteristics. The selected cultivars were both semi-bush and long-vined cultivars. The trials were conducted at the Valley Laboratory in Windsor on a well drained sandy terrace soil (Merrimac sandy loam) and at Lockwood Farm in Hamden on a moderately well drained loamy upland soil (Cheshire fine sandy loam).

In 2017, average yield of all butternut squash cultivars was 24.7 tons/acre (T/A) at Windsor compared to 20.5 T/A at Hamden. Combining both sites, yield of long-vined Ultra averaged 39.2 T/A compared to 28.9 T/A for semi-bush Atlas, the highest yielding semi-bush cultivar. At both sites, high yields of Ultra was due to a greater number of fruit per plant as the average weight of the fruit was similar to Butternut 23. For Atlas, high yields were due to heavier fruit, with the average weight/fruit that was more than double weights of other semi-bush cultivars at both sites.

In 2018, average yield of all butternut squash cultivars was 14.9 T/A at Windsor compared to 23.5 T/A at Hamden. Combining both sites, yield of long-vined Ultra averaged 29.5 T/A compared to 28.6 T/A for semi-bush Atlas, the highest yielding semi-bush cultivar. High yields of Ultra were due to heavier fruit at Windsor. At Hamden, high yields of Ultra could be attributed to a greater number of fruit per plant as well as heavier fruits. For Atlas, high yields were due to heavier fruit, with the average weight/fruit more than double other semi-bush cultivars at both sites.

In 2019, average yield of all butternut squash cultivars was 32.6 T/A at Windsor compared to 31.0 T/A at Hamden. Combining both sites, yield of long-vined Ultra averaged 47.2 T/A compared to 46.2 T/A for semi-bush Atlas, the highest yielding semi-bush cultivar. High yields of Ultra at Windsor were due to heavier fruit. At Hamden, high yields could be attributed to a greater number of fruit per plant as well as heavier fruits. For Atlas, high yields were due to heavier fruit, with the average weight/fruit 2 lbs more than the other semi-bush cultivars at both sites.

Combining all the years and both sites, Ultra (38.7 T/A) and Atlas (34.1 T/A) averaged the highest yields and were the only cultivars over 30 T/A. Ultra is optimum if space is not limiting and can accommodate vines up to 12 feet long. Ultra has very long, slender necks. If thick necked blocky fruit is preferred then, Quantum would also be a good choice. Butternut 23 also produced large fruit but were fewer in number. If space is limited, Atlas is the preferred choice of the semi-bush cultivars evaluated. Semi-bush cultivars Butternut 401 and Victory produced a greater number of fruit per plant but the fruit was smaller. All cultivars (long-vined and semi-bush) produced excellent quality fruit at both sites during all three years.

## INTRODUCTION

Butternut squash (*Curcubita moschata*) is a winter squash whose ancestors were cultivated by pre-Columbian Indians in Mexico and South America. It is a member of the gourd family and is related to pumpkin and acorn squash. The modern variety of butternut squash was developed by Charles Leggett of Stow, MA in 1944 (Kerr, 2013). Leggett, who was not a plant breeder, developed the new variety at his home and then took the product to the Waltham Field Station. As the interior was as smooth as butter and sweet as a nut, it was called “butternut”. The variety name was then listed as “Waltham” after the research station and this variety is still available today. Plants produced fruit that had a thicker skin, fewer seeds, and less waste compared to other squash.

Butternut squash is now the most widely grown of any winter squash. Florida is the largest producer of butternut squash in the United States. Winter squash in general are popular for fall sales at roadside stands and sales rooms because of their versatility and their storability. Home growers in the past have shunned butternut squash because they require large garden space. New short-vined and bush types developed in the last 20 years, have increased home gardener and small farmer interest.

Butternut squash will store for two to three months with some varieties keeping up to six months. They are best kept at 50°F with 50% humidity (Munro and Small, 1997). For the best flavor, butternut squash should cure for 2 months after harvest. Nutritionally, it is a good source of vitamin A, vitamin B<sub>6</sub>, vitamin C, and vitamin E as well as moderate levels of magnesium and manganese.

Hill (1999) conducted trials in 1997-1998 of winter squash that included six cultivars of butternut squash in Hamden and Windsor. In this bulletin, I report on yield and plant characteristics of 10 cultivars of butternut squash grown at Hamden and Windsor in 2017-2019. The standard cultivar Waltham was repeated from the earlier trials for comparison with nine newer cultivars.

## METHODS AND MATERIALS

**Sites and soils:** Butternut squash trials were conducted for three years (2017-2019) at the Valley Laboratory in Windsor, CT on Merrimac sandy loam (Typic Dystrochrept), an inland sandy terrace soil with somewhat limited moisture holding capacity (Shearin and Hill, 1962); and at Lockwood Farm in Hamden, CT on Cheshire fine sandy loam (Typic Dystrochrept), a loamy upland soil with moderate moisture holding capacity (Reynolds, 1979).

**Cultivars:** Ten cultivars from Harris Seeds were grown all three years at both sites. Five were semi-bush cultivars (vines about 3 ft long) and five were long-vined cultivars (vines about 12 ft long). The semi-bush cultivars were Atlas, Butternut 401, Butternut 900, Butternut 1744, and Victory. The long-vined cultivars were Avalon, Butternut 23, Quantum, Ultra, and Waltham. Characteristics of the specific cultivars are described in Table 1.

**Culture:** Butternut squash was direct seeded in the field at both sites all three years. In 2017, butternut squash was seeded on June 21 in Hamden and June 23 in Windsor. In 2018, butternut squash was seeded on June 21 in Windsor and June 22 in Hamden. In 2019, butternut squash was seeded on June 19 at both sites. Three seeds were planted in each of fifteen sites per cultivar. Sites were 3 feet apart in rows separated by 4 feet. Each row was covered with black plastic mulch (3 ft wide) applied by a tractor-pulled plastic layer. Drip irrigation tubing was laid as the plastic was applied. Holes were punctured in the plastic at each planting site when the seeds were planted.

**Fertilization:** The field soils (pH 6.5) were fertilized at a rate of 1300 lb/A 10-10-10 just before seeding. Different experimental fields at each location were used each year to minimize potential disease build-up.

**Weed control:** Weeds around each plant were controlled by the black plastic mulch, Weeds in the aisles were mechanically controlled 1-2 times before vines completely carpeted the aisles.

**Insect and disease control:** Insects and diseases were controlled by Manzate, (mancozeb), Quadris (azostobin), Asana (esferivaterate), and Bravo (chlorothalmil) applied per labeled direction as needed throughout the growing season.

**Irrigation:** Water was supplied by drip irrigation at both sites in tubing laid when the plastic was applied. Plots were irrigated at both sites so that plots received at least 1 inch of water per week either through rainfall or irrigation.

**Harvest:** Butternut squash were harvested in October each year at both sites. Fruits were counted, weighed, and evaluated for quality.

**Statistical analysis:** A two-factor (cultivar, site) analysis of variance (ANOVA) was used to compare both the number of butternut squash per plant and weight per plant. Tukey's HSD test was used to test for significant differences between cultivar yields at  $p < 0.05$ .

## RESULTS AND DISCUSSION

**2017 Crop:** The average yield of all cultivars in Windsor was 24.7 T/A compared to 20.5 T/A in Hamden, a 20% difference (Tables 2 and 3). The average weight of the fruit was 4.0 lbs at Windsor and 3.8 lbs at Hamden with five out of the ten cultivars averaging over 0.5 lbs larger fruit at Windsor. The average number of fruit per plant was 3.4 at Windsor compared to 3.1 at Hamden, a 10% difference. Three cultivars (Ultra, Waltham, and Butternut 900) averaged greater than 1 fruit more per plant at Windsor compared to Hamden.

In Windsor, the average yield of the long-vined cultivars was 29.0 T/A compared to 20.3 T/A for semi-bush cultivars, a 43% difference (Table 2). For the long-vined cultivars, Ultra averaged the highest yields (45.4 T/A) and Quantum averaged the lowest yields (18.7 T/A), a 143% difference. The yield of Ultra was 59% greater than Waltham, the long-vined cultivar with the second highest yields (28.5 T/A). For semi-bush cultivars, Atlas averaged the highest yields (26.9 T/A) and Butternut 1744 averaged the lowest yields (14.7 T/A), a 83% difference. The yield of Atlas was 27% greater than Victory, the semi-bush cultivar with the second highest yields (21.2 T/A). The yield of the top long-vined cultivar (Ultra) was 69% greater than the yields of the top semi-bush cultivar (Atlas). Comparing both cultivars, even though the fruit of Atlas averaged greater than 1 pound per fruit, Ultra produced over double the number of fruit per plant.

In Hamden, the average yield of the long-vined cultivars was 23.9 T/A compared to 17.0 T/A for semi-bush cultivars, a 41% difference (Table 3). For the long-vined cultivars, Ultra averaged the highest yields (33.0 T/A) and Avalon averaged the lowest yields (17.8 T/A), a 85% difference.

The yield of Ultra was 43% greater than Waltham, the long-vined cultivar with the second highest yields (23.1 T/A). The yields of long-vined cultivars Waltham, Quantum, and Butternut 23 had yields within 2% of one another. For semi-bush cultivars, Atlas averaged the highest yields (28.3 T/A) and Butternut 1744 averaged the lowest yields (10.2 T/A), a 177% difference. The yield of Atlas was 37% greater than Butternut 401, the semi-bush cultivar with the second highest yields (20.7 T/A). The semi-bush cultivars with the lowest yields (Butternut 900 and Butternut 1744) had yields within 14% of one another. The yield of the top long-vined yielder (Ultra) was 17% greater than the yield of the top semi-bush yielder (Atlas).

**2018 Crop:** The average yield of all cultivars in Hamden was 23.5 T/A compared to 14.9 T/A in Windsor, a 58% difference (Tables 4 and 5). The average weight of the fruit was 3.5 lbs at Hamden compared to 3.0 lbs at Windsor with four out of the ten cultivars averaging 0.7 lbs larger fruit at Hamden compared to Windsor. The average number of fruit per plant was 3.8 at Hamden compared to 2.9 at Windsor, a 31% difference. Five cultivars (Victory, Ultra, Butternut 401, Atlas, and Quantum) averaged more than 1 fruit per plant at Hamden compared to Windsor.

In Windsor, the average yield of the long-vined cultivars was 15.8 T/A compared to 13.9 T/A for semi-bush cultivars, a 14% difference (Table 4). For the long-vined cultivars, Ultra averaged the highest yields (20.5 T/A) and Avalon averaged the lowest yields (11.1 T/A), a 85% difference. The yield of Ultra was 18% greater than Butternut 23, the long-vined cultivar with the second highest yields (17.4 T/A). For semi-bush cultivars, Atlas averaged the highest yields (18.2 T/A) and Butternut 900 averaged the lowest yields (10.5 T/A), a 73% difference. The yield of Atlas was 28% greater than Victory, the semi-bush cultivar with the second highest yields (14.2 T/A). The yield of the top long-vined cultivar (Ultra) was 13% greater than the yields of the top semi-bush cultivar (Atlas).

In Hamden, the average yield of the long-vined cultivars was 23.8 T/A compared to 23.3 T/A for semi-bush cultivars, a 2% difference (Table 4). For the long-vined cultivars, Ultra averaged the highest yields (38.5 T/A) and Avalon averaged the lowest yields (12.9 T/A), a 198% difference. The yield of Ultra was 26% greater than Quantum, the long-vined cultivar with the second highest yields (30.5 T/A). For semi-bush cultivars, Atlas averaged the highest yields (39.0

T/A) and Butternut 900 averaged the lowest yields (12.2 T/A), a 220% difference. The yield of Atlas was 36% greater than Butternut 401, the semi-bush cultivar with the second highest yields (28.7 T/A). The yield of the top semi-bush cultivar (Atlas) and the yield of the top long-vined cultivar (Ultra) were within 1% of one another.

**2019 Crop:** The average yield of all cultivars in Windsor was 32.6 T/A compared to 31.0 T/A in Hamden, a 5% difference (Tables 6 and 7). The average weight of the fruit was 4.4 lbs at Windsor compared to 3.8 lbs at Hamden with three out of the ten cultivars averaging over 1 lbs more per fruit at Windsor compared to Hamden. The average number of fruit per plant was 4.5 at Hamden compared to 4.2 at Windsor, a 7% difference.

In Windsor, the average yield of the long-vined cultivars was 33.7 T/A compared to 31.2 T/A for semi-bush cultivars, a 8% difference (Table 6). For the long-vined cultivars, Ultra averaged the highest yields (50.6 T/A) and Butternut 23 averaged the lowest yields (22.5 T/A), a 125% difference. The yield of Ultra was 35% greater than Avalon, the long-vined cultivar with the second highest yields (37.6 T/A). For semi-bush cultivars, Atlas averaged the highest yields (47.9 T/A) and Butternut 1744 averaged the lowest yields (21.6 T/A), a 122% difference. The yield of Atlas was 43% greater than Victory, the semi-bush cultivar with the second highest yields (33.4 T/A). The yield of the top long-vined cultivar (Ultra) was 6% greater than the yields of the top semi-bush cultivar (Atlas).

In Hamden, the average yield of the long-vined cultivars was 34.2 T/A compared to 27.7 T/A for semi-bush cultivars, a 23% difference (Table 7). For the long-vined cultivars, Ultra averaged the highest yields (43.9 T/A) and Waltham averaged the lowest yields (25.6 T/A), a 71% difference. The yield of Ultra was 4% greater than Quantum, the long-vined cultivar with the second highest yields (42.3 T/A). For semi-bush cultivars, Atlas averaged the highest yields (44.5 T/A) and Butternut 401 averaged the lowest yields (20.1 T/A), a 121% difference. The yield of Atlas was 71% greater than Butternut 900, the semi-bush cultivar with the second highest yields (26.0 T/A). The yield of the top long-vined cultivar (Ultra) and the yield of the top semi-bush cultivar (Atlas) were within one percent of one another.

**2017-2019 Compiled:** Averaging over all years and both sites, average yield of long-vined cultivars was 26.8 T/A compared to 22.3 T/A for semi-bush cultivars, a 20% difference (Table 8). Long-vined cultivars averaged almost 1 lb more per fruit and almost 0.5 more fruit per plant. Ultra had the highest yields for long-vined cultivars (38.7 T/A) and Butternut 23 had the lowest yields (22.7 T/A), a 70% difference. The yield of Ultra was 46% greater than Quantum, the long-vined cultivar with the second highest yields (26.5 T/A). While the lb/fruit of Butternut 23 and Ultra were similar, Butternut 23 had significantly fewer fruit per plant. The long-vined cultivars with the lowest yields (Waltham, Avalon, and Butternut 23) had yields within 3% of one another.

For semi-bush cultivars, Atlas averaged the highest yields (34.1 T/A) and Butternut 1744 averaged the lowest yields (16.9 T/A), a 102% difference. The yield of Atlas was 54% greater than Butternut 401, the semi-bush cultivar with the second highest yields (22.1 T/A). The long-vined cultivars with the lowest yields (Butternut 900 and Butternut 1744) had yields within 2% of one another. The yield of the top long-vined cultivar (Ultra) was 13% greater than the yield of the top semi-bush cultivar (Atlas). Lumping all the cultivars together, four out of five of the top yielding cultivars were long-vined cultivars with the fifth long-vined cultivar in the sixth position. There was only a 2% difference in the yields of cultivars in the fourth, fifth, and sixth positions.

## SUMMARY

It appears obvious that Ultra and Atlas are cultivars of choice of the ten cultivars evaluated. If space is not limiting and can accommodate vines up to 12 feet long, Ultra is optimum. Ultra has very long, slender necks. If thick necked blocky fruit is preferred, then Quantum would also be a good choice. Butternut 23 also produced large fruit but were fewer in number. When comparing Atlas and Waltham (the old standard), the average number of fruit per plant is identical, but the fruit of Atlas averaged over 2 lbs/fruit than the fruit of Waltham. This translates to over 15 more tons per acre of squash. If space is limited, Atlas is the preferred choice of the semi-bush cultivars evaluated. Semi-bush cultivars Butternut 401 and Victory produced a greater number of fruit per plant but the fruit was smaller. All cultivars (long-vined and semi-bush) produced excellent quality fruit at both sites during all three years.

**REFERENCES**

- Hill, D.E. 1999. Winter Squash Trials 1997-1998. Connecticut Agricultural Experiment Station Bulletin 960. October 1999. 11 pp.
- Kerr, B. 2013. The strange history of the butternut. Farmer's weekly. September 21, 2013.
- Munro, D.B. and E. Small. 1997. Vegetables of Canada. NRC Research Press. P. 179. ISBN 9780660195032
- Reynolds, C.A. 1979. Soil survey of New Haven County, Connecticut. USDA. Soil Conservation Service
- Shearin, A.E. and D.E. Hill. 1962. Soil survey of Hartford County, Connecticut. USDA. Soil Conservation Service

**Table 1.** Characteristics of cultivars used in trials

Cultivar Habit	Fruit Size	Fruit Weight	Features	
Atlas	Semi-bush	10-12"	6 lbs	Uniform, consistent, high yields
Avalon	Vine	10-12"	3-4 lbs	Good packing variety
Butternut 23	Vine	12-15"	5-6 lbs	Powdery mildew tolerant, blocky
Butternut 401	Semi-bush	8-9"	2-3 lbs	Powdery mildew tolerant, uniform
Butternut 900	Semi-bush	8-9"	2-3 lbs	Powdery mildew tolerant, uniform
Butternut 1744	Semi-bush	8-9"	2-3 lbs	Powdery mildew tolerant,
Quantum	Vine	6-8"	3-4 lbs	Thick necked, blocky, high yields
Ultra	Vine	12-18"	5-6 lbs	Long necked, high yields
Victory	Semi-bush	6-8"	2-3 lbs	Classic butternut shape
Waltham	Vine	10-12"	3-4 lbs	More variable than hybrids

**Table 2.** Yield of butternut squash at Windsor in 2017

Cultivar	lb/fruit	#/plant	lb/plant	T/A <sup>2</sup>
<b>Semi-bush</b>				
Atlas	6.9	2.1	14.8	26.9
Butternut 401	3.2	3.5	11.1	20.1
Butternut 900	3.0	3.4	10.2	18.5
Butternut 1744	3.0	2.7	8.1	14.7
Victory	3.0	3.9	11.7	21.2
<b>Average</b>	<b>3.8</b>	<b>3.1</b>	<b>11.2</b>	<b>20.3</b>
<b>Long-vined</b>				
Avalon	3.8	3.8	14.3	26.0
Butternut 23	5.8	2.5	14.7	26.7
Quantum	3.2	3.2	10.3	18.7
Ultra	5.8	4.3	25.0	45.4
Waltham	3.1	5.0	15.7	28.5
<b>Average</b>	<b>4.3</b>	<b>3.8</b>	<b>16.0</b>	<b>29.0</b>
<b>Site Average</b>	<b>4.0</b>	<b>3.4</b>	<b>13.6</b>	<b>24.7</b>

<sup>2</sup>3630 plants/A (4 X 3 foot spacing)

**Table 3.** Yield of butternut squash at Hamden in 2017

Cultivar	lb/fruit	#/plant	lb/plant	T/A <sup>z</sup>
<b>Semi-bush</b>				
Atlas	6.3	2.5	15.6	28.3
Butternut 401	2.7	4.3	11.4	20.7
Butternut 900	2.9	2.2	6.4	11.6
Butternut 1744	2.4	2.3	5.6	10.2
Victory	2.2	3.5	7.9	14.3
<b>Average</b>	<b>3.3</b>	<b>3.0</b>	<b>9.4</b>	<b>17.0</b>
<b>Long-vined</b>				
Avalon	2.9	3.5	9.8	17.8
Butternut 23	5.5	2.3	12.5	22.7
Quantum	3.7	3.4	12.6	22.9
Ultra	5.6	3.3	18.2	33.0
Waltham	3.6	3.5	12.7	23.1
<b>Average</b>	<b>4.3</b>	<b>3.2</b>	<b>13.2</b>	<b>23.9</b>
<b>Site Average</b>	<b>3.8</b>	<b>3.1</b>	<b>11.3</b>	<b>20.5</b>

<sup>z</sup>3630 plants/A (4 X 3 foot spacing)**Table 4.** Yields of butternut squash at Windsor in 2018

Cultivar	lb/fruit	#/plant	lb/plant	T/A <sup>z</sup>
<b>Semi-bush</b>				
Atlas	5.0	2.0	10.0	18.2
Butternut 401	1.7	4.1	7.0	12.7
Butternut 900	2.2	2.7	5.8	10.5
Butternut 1744	1.9	4.1	7.7	14.0
Victory	2.5	3.1	7.8	14.2
<b>Average</b>	<b>2.7</b>	<b>3.2</b>	<b>7.7</b>	<b>13.9</b>
<b>Long-vined</b>				
Avalon	2.9	2.1	6.1	11.1
Butternut 23	3.4	2.5	9.6	17.4
Quantum	2.9	2.7	8.0	14.5
Ultra	4.6	2.5	11.3	20.5
Waltham	2.9	3.0	8.6	15.6
<b>Average</b>	<b>3.3</b>	<b>2.6</b>	<b>8.7</b>	<b>15.8</b>
<b>Site Average</b>	<b>3.0</b>	<b>2.9</b>	<b>8.2</b>	<b>14.9</b>

<sup>z</sup>3630 plants/A (4 X 3 foot spacing)

**Table 5.** Yields of butternut squash at Hamden in 2018

Cultivar	lb/fruit	#/plant	lb/plant	T/A <sup>z</sup>
<b>Semi-bush</b>				
Atlas	5.7	3.8	21.5	39.0
Butternut 401	2.8	5.7	15.8	28.7
Butternut 900	2.5	2.7	6.7	12.2
Butternut 1744	2.2	4.4	9.9	18.0
Victory	2.3	4.4	10.3	18.7
<b>Average</b>	<b>3.1</b>	<b>4.2</b>	<b>12.8</b>	<b>23.3</b>
<b>Long-vined</b>				
Avalon	2.7	2.7	7.1	12.9
Butternut 23	4.7	2.3	11.0	20.0
Quantum	4.0	4.2	16.8	30.5
Ultra	5.0	4.3	21.2	38.5
Waltham	2.8	3.4	9.4	17.1
<b>Average</b>	<b>3.8</b>	<b>3.4</b>	<b>13.1</b>	<b>23.8</b>
<b>Site Average</b>	<b>3.5</b>	<b>3.8</b>	<b>13.0</b>	<b>23.5</b>

<sup>z</sup>3630 plants/A (4 X 3 foot spacing)**Table 6.** Yields of butternut squash at Windsor in 2019

Cultivar	lb/fruit	#/plant	lb/plant	T/A <sup>z</sup>
<b>Semi-bush</b>				
Atlas	6.6	4.0	26.4	47.9
Butternut 401	2.8	5.9	16.6	30.1
Butternut 900	3.1	4.5	13.7	24.9
Butternut 1744	3.4	3.5	11.9	21.6
Victory	3.2	5.8	18.4	33.4
<b>Average</b>	<b>3.8</b>	<b>4.7</b>	<b>17.4</b>	<b>31.6</b>
<b>Long-vined</b>				
Avalon	4.6	4.5	20.7	37.6
Butternut 23	5.6	2.2	12.4	22.5
Quantum	3.3	4.5	15.0	27.2
Ultra	7.5	3.7	27.9	50.6
Waltham	3.9	4.3	16.8	30.5
<b>Average</b>	<b>5.0</b>	<b>3.8</b>	<b>18.6</b>	<b>32.2</b>
<b>Site Average</b>	<b>4.4</b>	<b>4.2</b>	<b>18.0</b>	<b>32.6</b>

<sup>z</sup>3630 plants/A (4 X 3 foot spacing)



**Table 7.** Yields of butternut squash at Hamden in 2019

Cultivar	lb/fruit	#/plant	lb/plant	T/A <sup>z</sup>
<b>Semi-bush</b>				
Atlas	5.0	4.9	24.5	44.5
Butternut 401	2.5	4.4	11.1	20.1
Butternut 900	3.1	4.5	14.3	26.0
Butternut 1744	3.2	3.9	12.7	23.1
Victory	2.8	5.0	13.8	25.0
<b>Average</b>	<b>3.3</b>	<b>4.5</b>	<b>15.3</b>	<b>27.7</b>
<b>Long-vined</b>				
Avalon	3.6	4.9	17.8	32.3
Butternut 23	5.6	2.7	14.9	27.0
Quantum	3.8	6.2	23.3	42.3
Ultra	5.2	4.7	24.2	43.9
Waltham	3.7	3.8	14.1	25.6
<b>Average</b>	<b>4.4</b>	<b>4.5</b>	<b>18.9</b>	<b>34.2</b>
<b>Site Average</b>	<b>3.8</b>	<b>4.5</b>	<b>17.1</b>	<b>31.0</b>

<sup>z</sup>3630 plants/A (4 X 3 foot spacing)

**Table 8.** Summary of yields of butternut squash combining all years and both sites

Cultivar	lb/fruit <sup>y</sup>	#/plant <sup>y</sup>	lb/plant	T/A <sup>z</sup>
<b>Semi-bush</b>				
Atlas	6.0a	3.2ab	18.8ab	34.1
Butternut 401	2.6b	4.6a	12.2c	22.1
Victory	2.6b	4.3a	11.6c	21.1
Butternut 900	2.8b	3.3ab	9.5c	17.2
Butternut 1744	2.7b	3.4ab	9.3c	16.9
<b>Average</b>	<b>3.3</b>	<b>3.8</b>	<b>12.3</b>	<b>22.3</b>
<b>Long-vined</b>				
Ultra	5.6a	3.8ab	21.3a	38.7
Quantum	3.4b	4.0a	14.6bc	26.5
Waltham	3.4b	3.8ab	12.9bc	23.4
Avalon	3.4b	3.6ab	12.6bc	22.9
Butternut 23	5.1a	2.4b	12.5c	22.7
<b>Average</b>	<b>4.2</b>	<b>3.5</b>	<b>14.8</b>	<b>26.8</b>

<sup>y</sup>means followed by the same letter within the same column were not significantly different by Tukey's HSD test at the five percent level

<sup>z</sup>3630 plants/A (4 X 3 foot spacing)



---

Equal employment opportunity means employment of people without consideration of age, ancestry, color, criminal record (in state employment and licensing), gender identity or expression, genetic information, intellectual disability, learning disability, marital status, mental disability (past or present), national origin, physical disability (including blindness), race, religious creed, retaliation for previously opposed discrimination or coercion, sex (pregnancy or sexual harassment), sexual orientation, veteran status, and workplace hazards to reproductive systems unless the provisions of sec. 46a-80(b) or 46a-81(b) of the Connecticut General Statutes are controlling or there are bona fide occupational qualifications excluding persons in one of the above protected classes. To file a complaint of discrimination, contact Dr. Jason White, Director, The Connecticut Agricultural Experiment Station, P.O. Box 1106, New Haven, CT 06504, (203) 974-8440 (voice), or [Jason.White@ct.gov](mailto:Jason.White@ct.gov) (e-mail). CAES is an affirmative action/equal opportunity provider and employer. Persons with disabilities who require alternate means of communication of program information should contact the Chief of Services, Michael Last at (203) 974-8442 (voice), (203) 974-8502 (FAX), or [Michael.Last@ct.gov](mailto:Michael.Last@ct.gov) (e-mail).

---