

2021 Pea Variety Trial

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Introduction: Very little work has been done to explore either varieties or growing techniques for fresh market peas in the last decade, though there have been both breeding advances and shifts in growing technique as the use of high tunnels has become more prevalent. This trial seeks to explore emerging varieties of shell and snap peas and to determine the suitability of a wide range of pea varieties to high tunnel production.

This trial was planted in a high tunnel at Philia Farm in Johnstown, NY, on March 24th, 2021. All varieties were trellised, a best practice for tunnel growing. Three replications were planted in a randomized complete block design with three replications. Each replicated plot was five feet long. Varieties were harvested until they either stopped producing pods or the pods became unmarketable. Data were collected on yield per plot, pod size, and taste.

The original plan was to have a paired comparison to the tunnel trial outside but due to unusually high seedcorn maggot pressure, this planting failed and was removed.

The weather was extremely hot in the early season and had an effect on the taste of the peas in the second week of harvest so average taste ratings are lower than in 2020. The peas grew and produced extremely well this year and overall yield may not be repeatable in other locations and years.



Shell Varieties

- o Lincoln
- o PLS 14
- o PLS 534
- o PLS 560
- o PLS 566
- o PLS 595

Snap Varieties

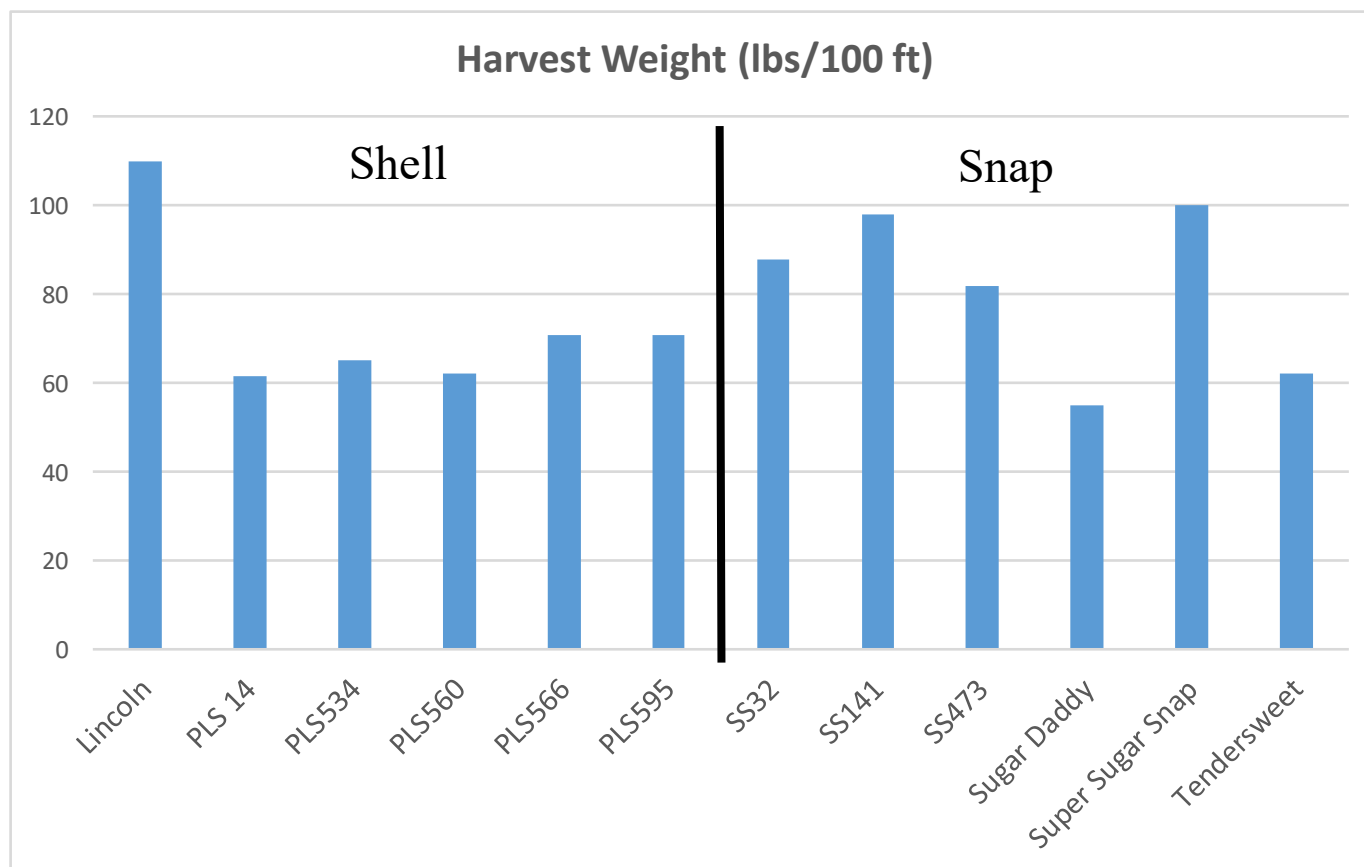
- o SS 141
- o SS 32
- o SS 473
- o Sugar Daddy
- o Super Sugar Snap
- o Tendersweet

Other Varieties

- o Parsley Pea

The Eastern New York Commercial Horticulture Program is a Cornell Cooperative Extension Partnership between Cornell University and the CCE Associations in the 17 Eastern New York counties.





Notable Varieties

Shell: Lincoln was the highest yielding variety by a significant margin but it is susceptible to powdery mildew and we saw that right at the end of harvest. Seems to be good in tunnels early but there may be issues with PM in the field. Both PLS595 and PLS566 yielded similarly but we like the pod size and extremely uniform fill of PLS595 better.

Snap: Super Sugar Snap continues to dominate yields but it really needs to be trellised for best production. SS141 also impressed with yield. SS32 was interesting due to its small pod size but it produced a huge amount of pods to make up for that smaller pod size and yielded very well.

For more comparative information, see the data tables at the end of this report.



Shell Peas

Lincoln

- From Fedco Seeds
- “Vines up to 3' bear 3–3½" slender curved pods with heaviest production in mid-July. Consistently 6–8 peas per pod. Susceptible to PM and other diseases so a good choice only if you can get on your ground in early spring. Tolerant to common wilt race 1”.
- Total of 264 oz harvested over 14 days equal to 110 lbs per hundred foot row
- Longest days to maturity, short harvest window of about 2 weeks
- Had some powdery mildew issues in the high tunnel towards the end of harvest.
- Averaged 4 out of 5 for taste
- Tasty and sweet



PLS 14

- From Pure Line Seeds
- “Plants are 24-30” tall with plenty of foliage and vigor. The plant stems and leaves are an attractive dark blue-green, while pea pods themselves stand out against the foliage with bright green color for an easy harvest.”
- Had some powdery mildew issues in the high tunnel towards the end of harvest.
- Total of 147 oz harvested over 13 days equal to 61 lbs per hundred foot row
- Short harvest window of about 2 weeks
- Averaged 3.8 out of 5 for taste
- Bright flavor and a little sweet, not a strong taste



PLS 534

- From Pure Line Seeds
- “PLS 534 is a second early Afila developed at Pure Line Seed’s research facility. Double pods filled with 8-9 peas create fantastic yields. This pea is resistant to Fusarium Wilt Race 1, Race 2, and Fusarium Root Rot.”
- Total of 156 oz harvested over 4 weeks equal to 65 lbs per hundred foot row
- Longest harvest window of 5 weeks
- Averaged 3.8 out of 5 for taste
- Sweet and delicious



PLS 560

- From Pure Line Seeds
- “The long pointed pods of PLS 560 fill to the tip with 10-12 dark green peas of excellent flavor. These nice, light green pods really stand out against the dark blue-green foliage. A strong-stemmed variety – it holds upright throughout the season, making harvest quick and very rewarding.”
- Total of 149 oz harvested over 2 weeks equal to 62 lbs per hundred foot row
- Short harvest window of about 2 weeks
- Averaged 3.8 out of 5 for taste
- Strong pea flavor



PLS 566

- From Pure Line Seeds
- “Recent trials of PLS 566 have shown this pea’s capability to return tremendous yields. These long light green pods really stand out against the strong, dark blue-green Afila vine. With two pods per node and 10-12 peas per pod.”
- Total of 170 oz harvested over 3 weeks equal to 71 lbs per hundred foot row
- Averaged 3.5 out of 5 for taste
- A little bland but still tasty



PLS 595

- From Pure Line Seeds
- “Plants will produce long pods, with on average 11 peas in each pod. Pure Line says: “Fresh market customers are raving about the ease of hand-picking due to high set of pods in plant and upright plant type.”
- Total of 170 oz harvested over 3 weeks equal to 71 lbs per hundred foot row
- Largest pods of all the shell varieties, 10 or more peas to a pod
- Averaged 4 out of 5 for taste
- Sweet and tasty



Snap

SS 32

- From Pure Line Seeds
- Pre-commercial so no information available
- Total of 211 oz harvested over 4 weeks equal to 88 lbs per hundred foot row
- Small pods, but well filled
- Lots of small pods
- Averaged 4.3 out of 5 for taste
- Very sweet and tasty



SS 141

- From Pure Line Seeds
- “Compact plant that forms a heavy set of extra-long, extra tasty pods that ripen within a short window. This strongly improved snap pea offers very high yield potential. Suitable for multiple succession plantings.”
- Total of 235 oz harvested over 4 weeks equal to 98 lbs per hundred foot row
- Averaged 3.3 out of 5 for taste
- Not very sweet but tasty



SS473

- From Pure Line Seeds
- Pre-commercial production so no information
- Total of 197 oz harvested over 3 weeks equal to 82 lbs per hundred foot row
- Averaged 3.5 out of 5 for taste
- Interesting taste, very nice



Sugar Daddy

- From Pure Line Seeds
- Total of 132 oz harvested over 3 weeks equal to 55 lbs per hundred foot row
- Had some pod fill issues, with severe curving and only one pea per pod, possibly due to the heat
- Averaged 4 out of 5 for taste
- Strong pea flavor and a little sweet



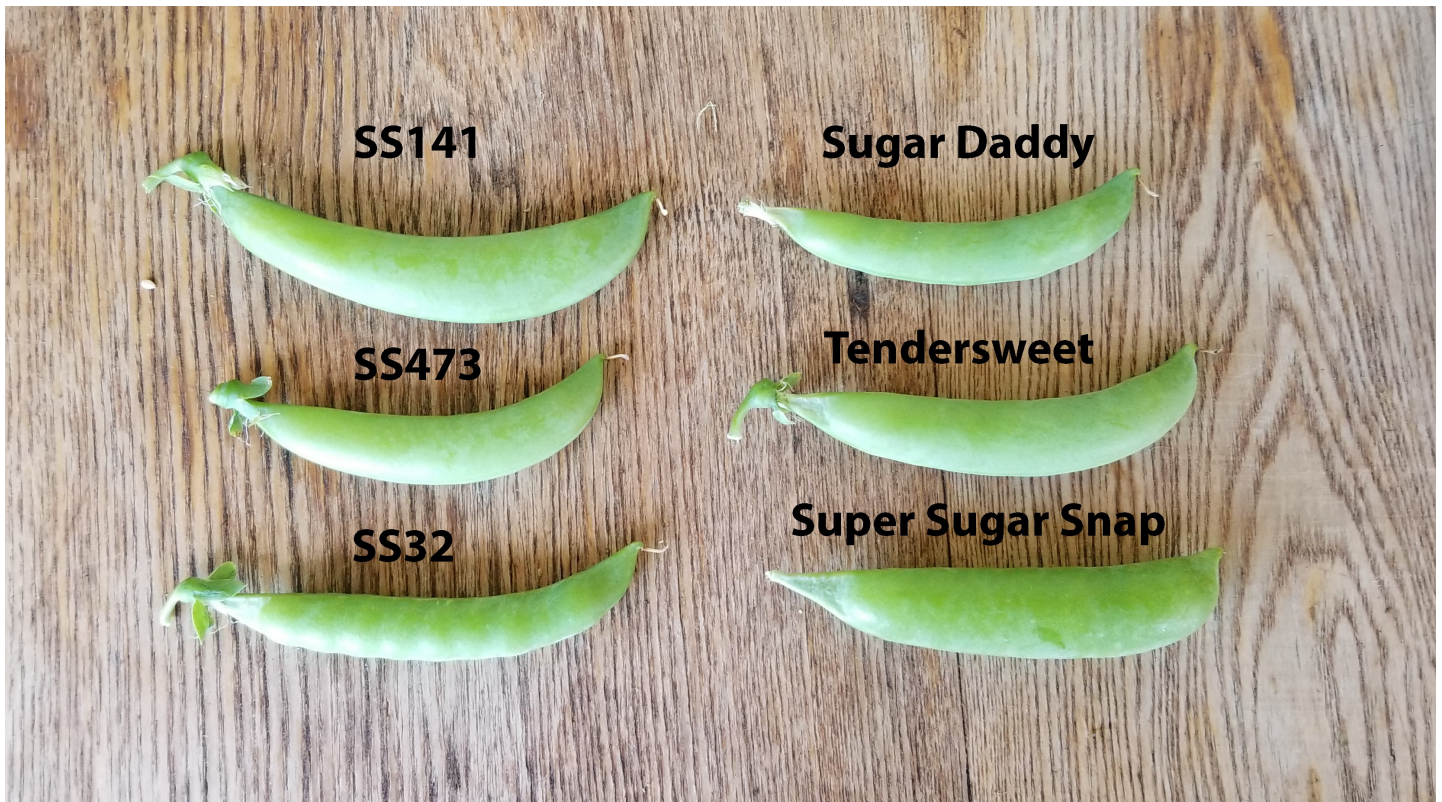
Super Sugar Snap

- From Harris Seeds
- “This improvement to the original Sugar Snap offers earlier maturity, PM resistance, and intermediate resistance to bean leaf roll virus. Super Sugar Snap’s tall 4 to 5’ vines need support.”
- Total of 240 oz harvested over 4 weeks equal to 100 lbs per hundred foot row
- Biggest pods and plants were extremely tall
- Averaged 4.3 out of 5 for taste
- Bright, refreshing taste, delicious



Tendersweet

- From Pure Line Seeds
- “Heavy yielding variety with extra-large, stringless pods. Vigorous plants keep yielding for multiple picks.”
- Total of 149 oz harvested over 4 weeks equal to 62 lbs per hundred foot row
- Averaged 4.2 out of 5 for taste
- Good pea flavor, tasty



Other

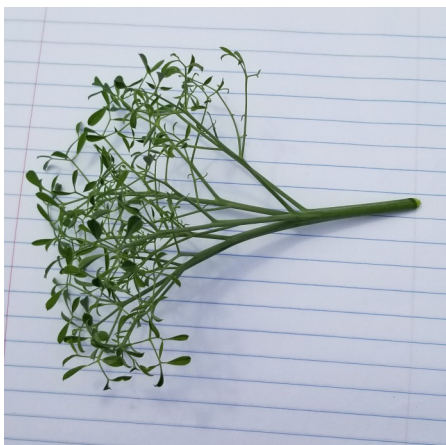
Parsley Pea

- From Pure Line Seeds
- Garnish peas

Interesting to grow, tasted like peas, very tasty!

5 feet filled a half size harvest tote, so definitely good yielding. Trellising and keeping them clean may be a little bit of an issue depending on how and when you harvest. They have the leaves instead of tendrils so they aren't able to grab a trellis in the same way. We did think the Florida weave worked decently with them since the garnish parts flopped over the twine to hold the plants up.

Might be worth harvesting 2/3 of the ends and keeping 1/3 for support. You might need to do multiple plantings as they are pretty determinate with regular removing of garnishes. We recommend using clippers to harvest



Cornell Cooperative Extension
Eastern NY Commercial Horticulture Program

Thank you to Pure Line
Seeds, Fedco Seeds, High
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this trial

2021 Pea Variety Trial Table 1

Variety	Company	Type	Harvest Weight (oz)	Weight (lbs) per 100 ft	Average taste (1-5 with 5 being delicious)	Notes
Lincoln	Fedco Seeds	Shell	264	110	4.0	
PLS 14	Pure Line Seeds	Shell	147.4	61	3.8	
PLS534	Pure Line Seeds	Shell	156.4	65	3.8	
PLS560	Pure Line Seeds	Shell	149.2	62	3.8	
PLS566	Pure Line Seeds	Shell	170	71	3.5	
PLS595	Pure Line Seeds	Shell	170	71	4.0	
SS32	Pure Line Seeds	Snap	211	88	4.3	
SS141	Pure Line Seeds	Snap	234.8	98	3.3	
SS473	Pure Line Seeds	Snap	196.6	82	3.5	
Sugar Daddy	Pure Line Seeds	Snap	132.2	55	4.0	
Super Sugar Snap	Harris Seeds	Snap	240	100	4.2	Trellis - 5 ft tall
Tendersweet	Pure Line Seeds	Snap	149	62	4.3	
Parlsey Pea	Pure Line Seeds	Garnish				

2021 Pea Variety Trial Table 2

Variety	Company	Type	Date Planted	First Harvest	Last Harvest	DTM	Harvest Length
Lincoln	Fedco Seeds	Shell	3/24/2021	6/15/2021	6/29/2021	83	14
PLS 14	Pure Line Seeds	Shell	3/24/2021	6/9/2021	6/22/2021	77	13
PLS534	Pure Line Seeds	Shell	3/24/2021	6/4/2021	6/29/2021	72	25
PLS560	Pure Line Seeds	Shell	3/24/2021	6/9/2021	6/22/2021	77	13
PLS566	Pure Line Seeds	Shell	3/24/2021	6/9/2021	6/29/2021	77	20
PLS595	Pure Line Seeds	Shell	3/24/2021	6/9/2021	6/29/2021	77	20
SS32	Pure Line Seeds	Snap	3/24/2021	6/4/2021	6/29/2021	72	25
SS141	Pure Line Seeds	Snap	3/24/2021	6/4/2021	6/29/2021	72	25
SS473	Pure Line Seeds	Snap	3/24/2021	6/9/2021	6/29/2021	77	20
Sugar Daddy	Pure Line Seeds	Snap	3/24/2021	6/9/2021	6/29/2021	77	20
Super Sugar Snap	Harris Seeds	Snap	3/24/2021	6/4/2021	6/29/2021	72	25
Tendersweet	Pure Line Seeds	Snap	3/24/2021	6/4/2021	6/29/2021	72	25
Parlsey Pea	Pure Line Seeds	Garnish	3/24/2021				