

# Field Day at Philia Farm

Where: Philia Farm, 134 Miller Rd, Johnstown, NY 12095

When: Thursday, August 5<sup>th</sup>, 4-6 pm

## Resources/information included:

2021 Onion Variety Trial

2021 Leek Variety Trial Map

2021 Beet Biocontrol Trial Map

2021 Mesotunnel Overview

2021 Pea Variety Trial Report

2020 Leek Variety Trial Report

Thank you to Pure Line Seeds, Fedco Seeds, Harris Seeds, High Mowing Seeds, Johnny's Selected Seeds, Bejo Seeds, Seed Savers Exchange, Vitalis Seeds, Certis Biologicals and Marrone Bio Innovations.

# Storage Onion Variety Trial

1. New York Early
2. Frontier
3. Yellow of Parma
4. Red Globe
5. Yellow Pear
6. Redwing
7. Talon
8. Calibra
9. Trapps Downing Yellow Globe
10. Red Carpet
11. Blush
12. Rossa di Milano
13. Yankee
14. Cartier
15. Oneida
16. Red Mountain
17. Powell
18. Cortland
19. Sedona
20. Rossa di Milano

Onions were seeded 3/26 with two different spacing types. One was four seeds to a cell as is standard with most growers. The second spacing was in strip trays and singled out for transplanting. The four per cell were transplanted into the field 4/26. The single plants were transplanted into the field on 5/12. For the four per cell, most were harvested 7/31 when they went down. The single cell varieties haven't been harvested yet.

Rossa di Milano is on the list twice from two different sources that are maintaining the variety separately and we wanted to compare them.

# Leek Variety Trial

Leek Field Map

East end of field, closest to house and barn

Row 1, full row		Row 2, short row	
Variety #	Rep #	Variety #	Rep #
11	3	7	3
4	3	3	3
6	3	13	3
14	3	9	3
6	2	12	3
11	2	10	3
1	2	5	3
9	2	2	3
4	2	8	3
7	2	1	3

woods

caterpillar tunnels

2	2
12	2
14	2
8	2
10	2
13	2
3	2
5	2
14	1
13	1
12	1
11	1
10	1
9	1
8	1
7	1
6	1
5	1
4	1
3	1
2	1
1	1

Far (west) end of field

1. Alto—summer
2. King Richard—summer
3. Lancia—summer
4. Chinook—fall
5. Comanche—fall
6. Curling—fall
7. Defender—fall
8. Jumper—fall
9. Lancelot—fall
10. Oslo—fall
11. Rally—fall
12. Runner—fall
13. Tadorna—fall
14. Takrima—winter

Leeks were seeded into strip trays 3/16, potted up into open trays and transplanted into the field on 6/11. This trial has three replications and the second two replications are randomized. Purple flags mark the start of the next replication

# Beet Biocontrol Trial

<u>Flag Colors</u>	<u>Treatment</u>
1 (White)	Untreated Control
2 (Yellow)	Badge X2 1.25 lb/A
3 (Blue)	Stargus 2qt/A + Badge X2 1.25 lb/A
4 (Purple)	Regalia 1 qt/A + Badge X2 1.25 lb/A
5 (Orange)	Double Nickel 1 qt/A + Cueva 1 gal/A
6 (Green)	Double Nickel 1 qt/A + Cueva 1 gal/A alternated with Lifeguard

Sprayed weekly starting 7/19 at 3-4 leaf stage. Cercospora Leaf Spot pressure heavy; possibly Phoma Leaf Spot and bacterial blight present as well. Awaiting lab results on diseases.

## Reflecting on the 2020 Preliminary Results of the Mesotunnel System in NY

By Kellie Damann and Sarah Pethybridge, Cornell AgriTech, Geneva

Finding new methods and developing innovative systems for growers is a top priority for many agricultural researchers. We want to find ways to help growers produce the best quality produce and stress less about crop protection. That is why the EVADE lab at Cornell AgriTech was excited to test out the mesotunnel system in 2020 and understand the benefits for organic cucurbit growers in NY. If you have been following the last few articles, then you are familiar with some of the benefits this system can provide growers. In this article we would like to share the preliminary results from the season, so you can see first-hand the impacts this could have on your cucurbit crop. Due to COVID-19 restrictions our trials had to be adjusted but we were still able to gain some valuable insight on the potential for this system.

The trial was located on certified organic land at Cornell AgriTech, Geneva. The information collected was focused on determining the impact of the mesotunnel on the insect pests and diseases of cucurbits. This included Cucumber Beetles and Squash Bugs along with the diseases they vector: Bacterial Wilt and Cucurbit Yellow Vine Disease (CYVD), respectively. We also monitored the incidence and severity of two commonly encountered fungal diseases, powdery mildew and downy mildew. Along with this we observed the behavior of pollinators within and outside the mesotunnel. At the end of the season, we collected yield data which compared the numbers of marketable fruit to unmarketable fruit and noted the factors that contributed to the unmarketable category. Two crops were included in the study: muskmelon (var. Athena) and acorn squash (var. Honey Bear). Each crop was grown in a single three-row plot either within the mesotunnel or uncovered.



Mesotunnel trial on the Cornell AgriTech Gates West certified organic research farm. The front is the acorn squash crop (mesotunnel and uncovered). Behind is the muskmelon crop with the same treatments. Photo by Kellie Damann.

*So, what happened?* Findings indicated that the mesotunnel system prevented insect pests from getting into the tunnel and causing damage. There was also a noticeable decrease in the incidence of plants affected by bacterial wilt and CYVD.

*Squash.* In the squash plots, cucumber beetles and squash bugs were present in the uncovered plot, but only a few cucumber beetles sneaked into the tunnel. This was late enough in the season, so no damage

resulted. The squash bug infestation led to 41% of the plants in the uncovered plot to be affected by CYVD. None of the plants in the mesotunnel had symptoms of CYVD. Although the netting was highly effective at preventing most of the insect pests from entering, towards the end of the season there was a large spike of aphids that formed within the tunnel. Fortunately, most of the fruit on the vines were at or near maturity so it did not impact the yield. Over the next few seasons, we are planning on observing if this is a trend and determining the best methods to control aphid populations. The uncovered squash plot had a slightly higher marketable yield than the covered. This variety produced a large amount of vegetative growth which could explain the slight reduction in yield due to the restricted space for fruit development to occur. This upcoming season we are testing a different variety to see how well it compares in this system.



Both pictures are from within the mesotunnel showing misshapen and not mature fruit due to the growth under the main stem. Photos by Kellie Damann.

*Muskmelon.* In the muskmelon plots, cucumber beetle populations increased significantly from the middle of July through to the end of August. The influx in cucumber beetles led to 65% of the muskmelon plants in the uncovered plot showing symptoms of bacterial wilt leading to plant death. On the other hand, only 29% of the plants in the tunnel showed symptoms of bacterial wilt. Symptoms of bacterial wilt were not observed until mid-August within the tunnel, so these plants already had produced fruit which were close to maturity.

At harvest, some significant differences appeared between the mesotunnel and uncovered plots. Eighty-eight fruit were harvested from the mesotunnel while only 65 from the uncovered plot. Of the total number harvested, 70 fruit were deemed marketable in the mesotunnel plot, while only 24 were marketable in the uncovered plot. In the uncovered plot most of the damage was due to insect damage, cracking, soft spots, and poor netting. In the tunnels unmarketable fruit was mainly due to overripe fruits that had soft spots. Fruit within the mesotunnel also ripened about a week earlier than in the uncovered plot.



Left: Melon grown in the uncovered plot with significant damage to the skin; Right: Melon grown within the mesotunnel. Photo by Kellie Damann.

*Looking forward to 2021.* Trials in 2020 therefore showed significant promise at excluding pest insects and were especially effective in muskmelon. This year we will be conducting larger replicated trials to gain an even better understanding on how this system works in organic cucurbit production. We will also be including a trial to investigate weed suppression options for their compatibility in a mesotunnel system.

This research is funded through the USDA-NIFA Organic Research and Extension Initiative led by Iowa State University. Sarah Pethybridge and Kellie Damann (Cornell AgriTech, Geneva) are the New York collaborators on this project. More details on the New York research can be found by contacting Sarah ([sjp277@cornell.edu](mailto:sjp277@cornell.edu)); (315)744-5359 [cell] or Kellie ([kcd48@cornell.edu](mailto:kcd48@cornell.edu)); (585)233-6779 [cell].

Please visit our project's website and follow us on Twitter to stay up to date on all the latest mesotunnel news.

The Current Cucurbit Project: <https://www.cucurbit.plantpath.iastate.edu/>

Twitter: [@TCucurbit](https://twitter.com/TCucurbit)

YouTube: [The Current Cucurbit](https://www.youtube.com/channel/UCucurbit)

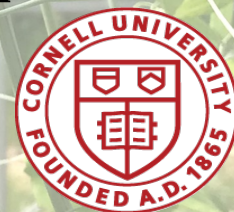
Join our mailing list: [cucurbit-news@iastate.edu](mailto:cucurbit-news@iastate.edu)

EVADE Lab Website (NY): <https://blogs.cornell.edu/pethybridgelab/>

Twitter (NY): [@Cornell\\_EVADE](https://twitter.com/Cornell_EVADE)

# 2021 Pea Variety Trial

Crystal Stewart Courtens and Natasha Field



**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 24<sup>th</sup>, 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

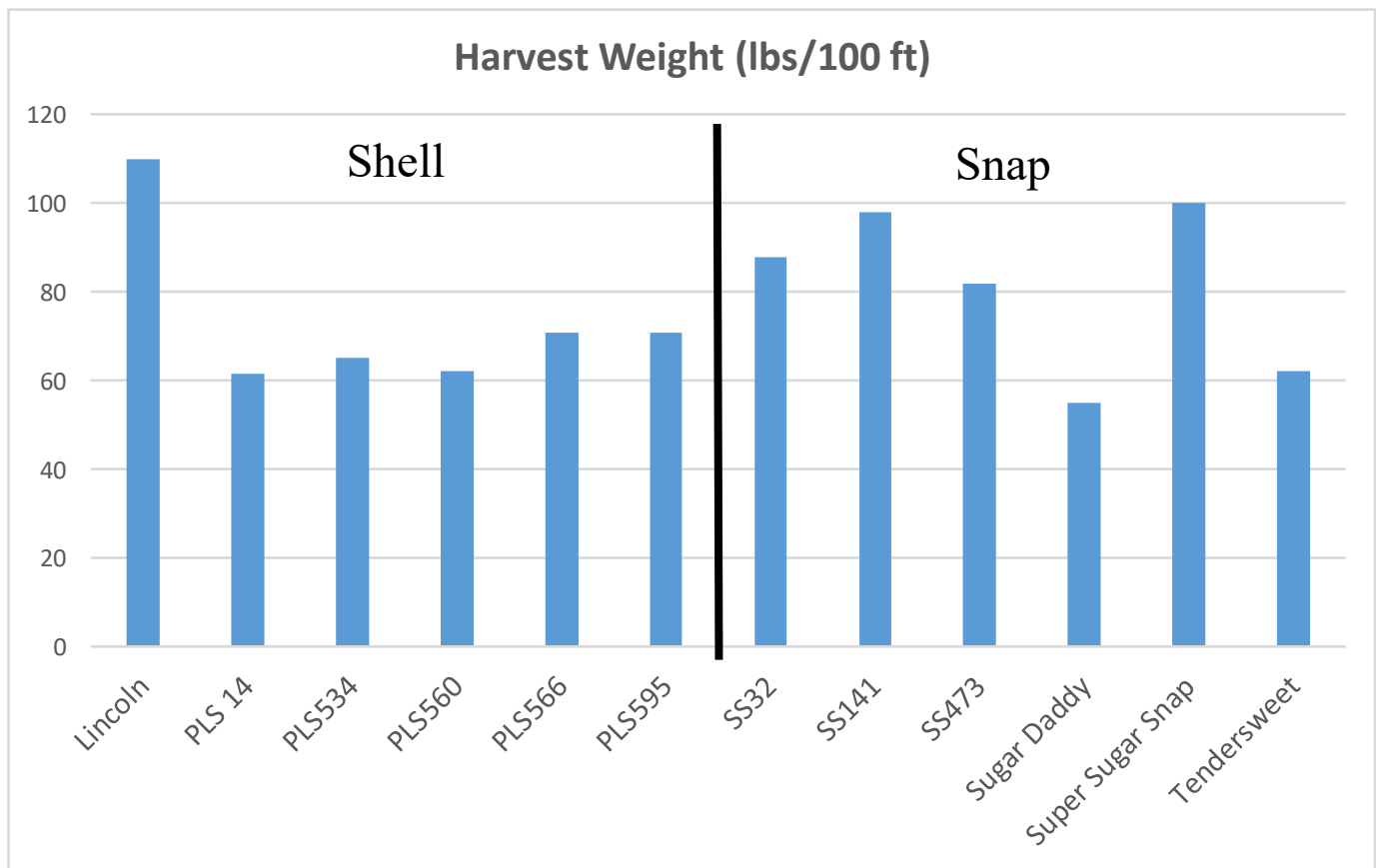
### Other Varieties

- 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



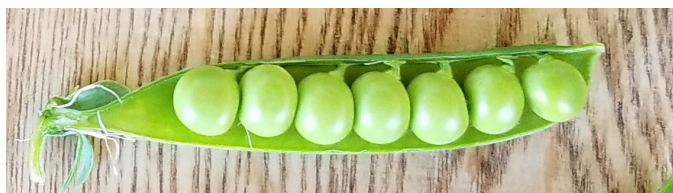
## PLS 14

- 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 Afilea 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



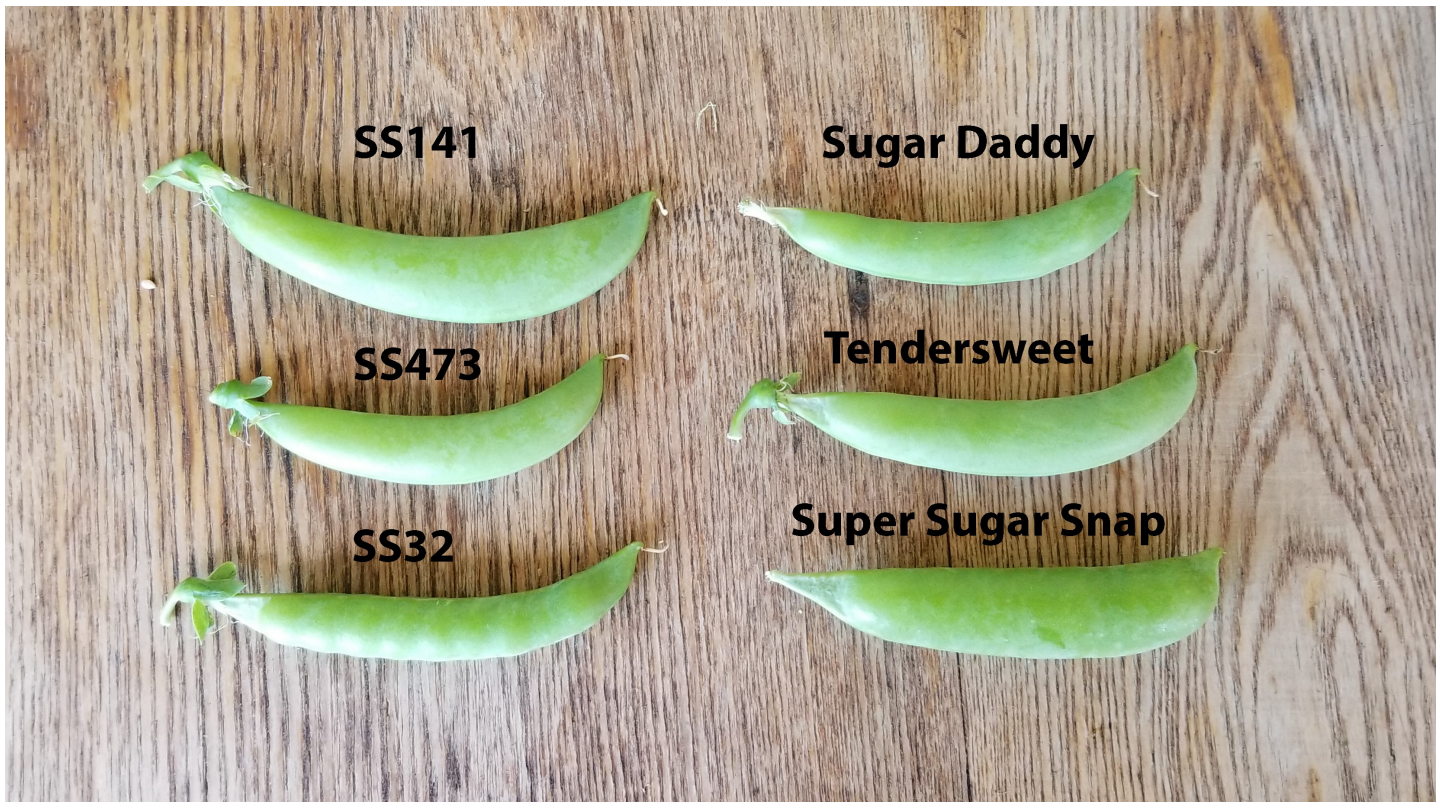
## Super Sugar Snap

- 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

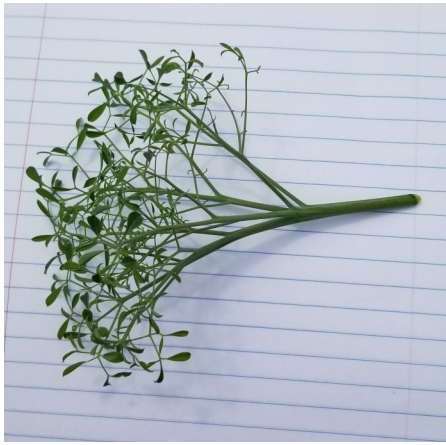
## Parsley Pea

- 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 Mowing Seeds and Harris Seeds for providing seed for 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				

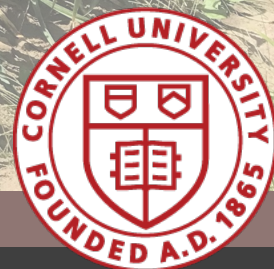
**2021 Pea Variety Trial Table 2**

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				



# 2020 Leek Variety Trial

Crystal Stewart-Courtens & Natasha Field



The leek variety trial was hosted by Philia Farm in Johnstown, NY. The leeks were seeded into strip trays on March 17<sup>th</sup> and moved to open flats one month later. They were transplanted into the field May 22<sup>nd</sup> and 27<sup>th</sup>. They were planted two rows to a bed, 18 inches between rows and 6 inch spacing in-row. The leeks were harvested as they matured from August 3<sup>rd</sup> to November 10<sup>th</sup>. Varieties were evaluated on disease resistance, height, weight per 20 leeks, amount of bulbing, uniformity and diameter.



## What's in a leek?

All leeks are pretty much the same, right? In fact, we found a lot more leek varieties available than we expected; both open pollinated/heirlooms and hybrids that varied in days to maturity, size, shape, color and height.



Growers may consider adding a couple new varieties into their cropping system to see how they perform. There may be a more vigorous, higher yielding or more appealing leek available for your environment and/or market.

### Summer Leeks

- Alto
- Batter
- Biker
- Bowler
- Columbus
- Fencer
- King Richard
- Lancia
- Pancho
- Skater
- Striker
- Verdonnet

### Fall Leeks

- Chinook
- Comanche
- Curling
- Defender
- Jaune de Poitou
- Jumper
- Lancelot
- Megaton
- Prizetaker
- Rally
- Runner
- Surfer
- Tadorna
- Takrima
- Walker

### Winter Leeks

- Bandit
- Blue Solaise
- Dawn Giant
- Esther Cook
- Keeper
- Liege Giant
- Mechelen Blue Green
- Shades of Belgian Blue

## Results and discussion:

Following this brief discussion, each variety is first compared to each other in terms of yield, and then presented individually with a photograph and key information related to days to maturity, yield, disease resistance, and bolting.

Before entering the presentation of data, it is important to note that a number of leeks were harvested after the recommended days to maturity (DTM). In all of these cases the varieties could have been harvested at the suggested DTM, but when a variety showed no signs of bolting or splitting, and had low disease incidence, we chose to leave it until it appeared to have stopped improving in weight and size. The varieties with delayed harvest were: Skater, Jaune de Poutiou, Jumper, Lancelot, Prizetaker, Tadorna, Esther Cook and Keeper. They all kept in the field at least a month longer than their recommended DTM.



We also left some varieties out in the field after harvesting our samples to see how they held. Bowler and Megaton both did well and continued to size after harvest at correct DTM.

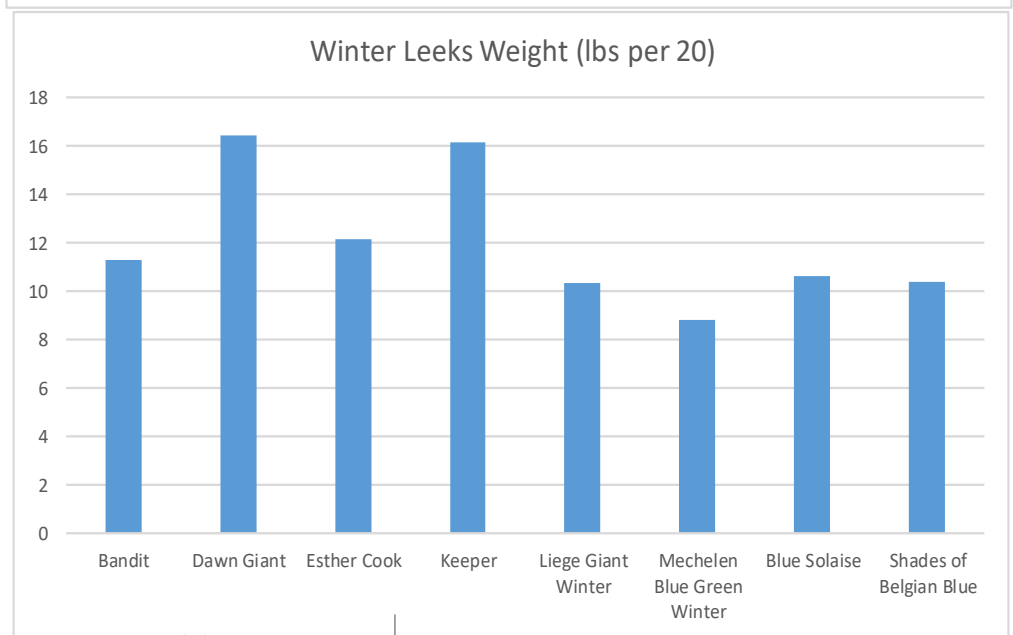
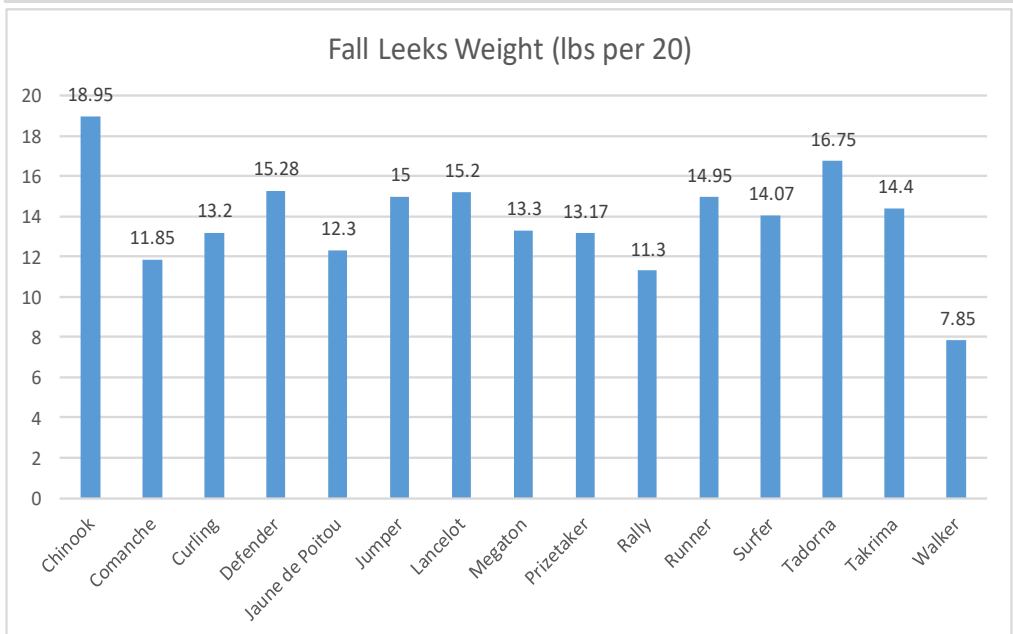
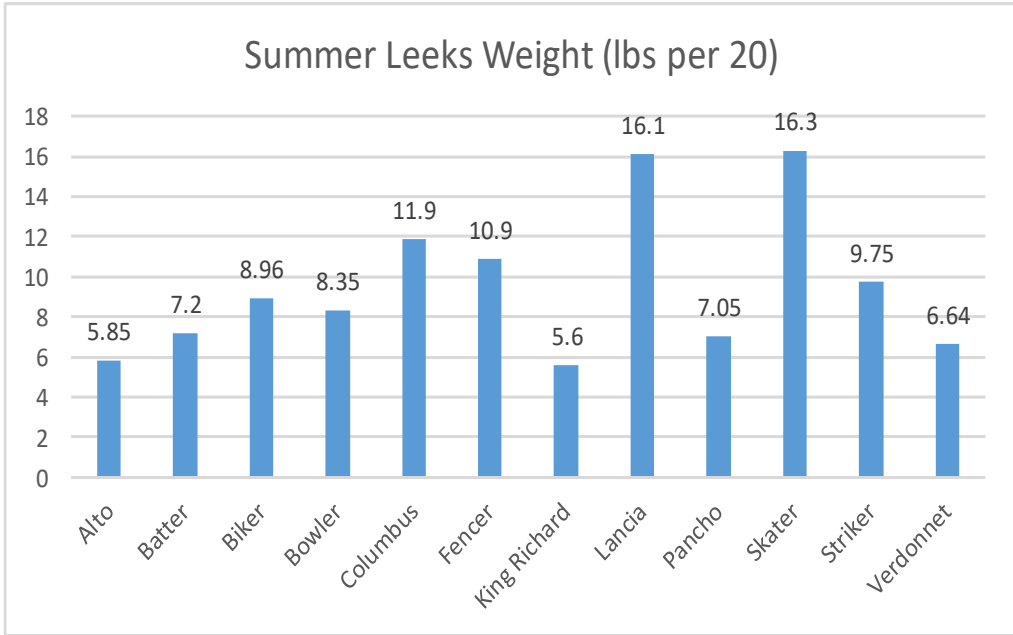
The environmental conditions this season are also noteworthy. We had 32 days where the temperature was over 85°F and 3 inches less rain than average. Disease pressure was light for most of the season, with only a few varieties showing notable Purple Blotch damage. Susceptible varieties were Comanche, Takrima, Runner, and Walker.

One of the key takeaways from this trial is that there are many viable alternatives to the industry standards of King Richard early and Megaton later in the season. Personal favorites included Skater early, for its deeper blue-green color and stouter habit; Chinook as a mid-season selection for uniformity and size; and Keeper as a late selection for its beautiful upright habit and deep blue/green color.

Year one of this trial was used for screening a large number of leek varieties; year two will be used to dig deeper into some key questions surrounding leek production in the northeast. We'll reduce the number of varieties while introducing replication to provide statistical information on yield potential, and will be looking at earlier harvest and longer storage as one potential method to avoid Allium Leaf Miner infestation.



**Quick Comparison: Weight (lbs) of 20 leeks per variety**



# Summer Leeks



## Alto

- From High Mowing Seeds
- Listed DTM—85 days from transplant
- Actual DTM—80 days from transplant
- 18 inches tall
- 5.85 lbs per 20 leeks
- Light green color
- No bulbing
- 1.24 inch average diameter



## Batter

- From Bejo Seeds
- Listed DTM—120 days from transplant
- Actual DTM—80 days from transplant
- 18 inches tall
- 7.2 lbs per 20 leeks
- Dark green color
- No bulbing
- 1.13 inch average diameter

# Summer Leeks



## Biker

- From Bejo Seeds
- Listed DTM—99 days from transplant
- Actual DTM—73 days from transplant
- 18 inches tall
- 8.96 lbs per 20 leeks
- Dark green color
- No bulbing



## Bowler

- From Bejo Seeds
- Listed DTM—100 days from transplant
- Actual DTM—80 days from transplant
- 18 inches tall
- 8.35 lbs per 20 leeks
- Dark green color
- No bulbing
- 1.32 inch average diameter
- Held extremely well after harvest, until 10/30

# Summer Leeks



## Columbus

- From Bejo Seeds
- Listed DTM—100 days from transplant
- Actual DTM—73 days from transplant
- 18 inches tall
- 11.9 lbs per 20 leeks
- Dark green color
- No bulbing



## Fencer

- From Bejo Seeds
- Listed DTM—Not available
- Actual DTM—98 days from transplant
- 14 inches tall
- 10.9 lbs per 20 leeks
- Medium green color
- No bulbing
- 1.55 inch average diameter

# Summer Leeks



## King Richard

- From Johnny's Selected Seeds
- Listed DTM—85 days from transplant
- Actual DTM—80 days from transplant
- 12 inches tall
- 5.6 lbs per 20 leeks
- Light green color
- No bulbing
- 1.23 inch average diameter



## Lancia

- From Bejo Seeds
- Listed DTM—98 days from transplant
- Actual DTM—98 days from transplant
- 16 inches tall
- 16.1 lbs per 20 leeks
- Medium green color
- No bulbing
- 1.63 inch average diameter

# Summer Leeks



## Pancho

- From Adaptive Seeds
- Listed DTM—Not available
- Actual DTM—80 days from transplant
- 18 inches tall
- 7.05 lbs per 20 leeks
- Medium green color
- No bulbing
- 1.41 inch average diameter
- Inconsistent size



## Skater

- From Bejo Seeds
- Listed DTM—110 days from transplant
- Actual DTM—158 days from transplant
- 18 inches tall
- 16.3 lbs per 20 leeks
- Dark green color
- Slight bulbing
- 1.91 inch average diameter
- Highest yielding summer leek



# Summer Leeks



## Striker

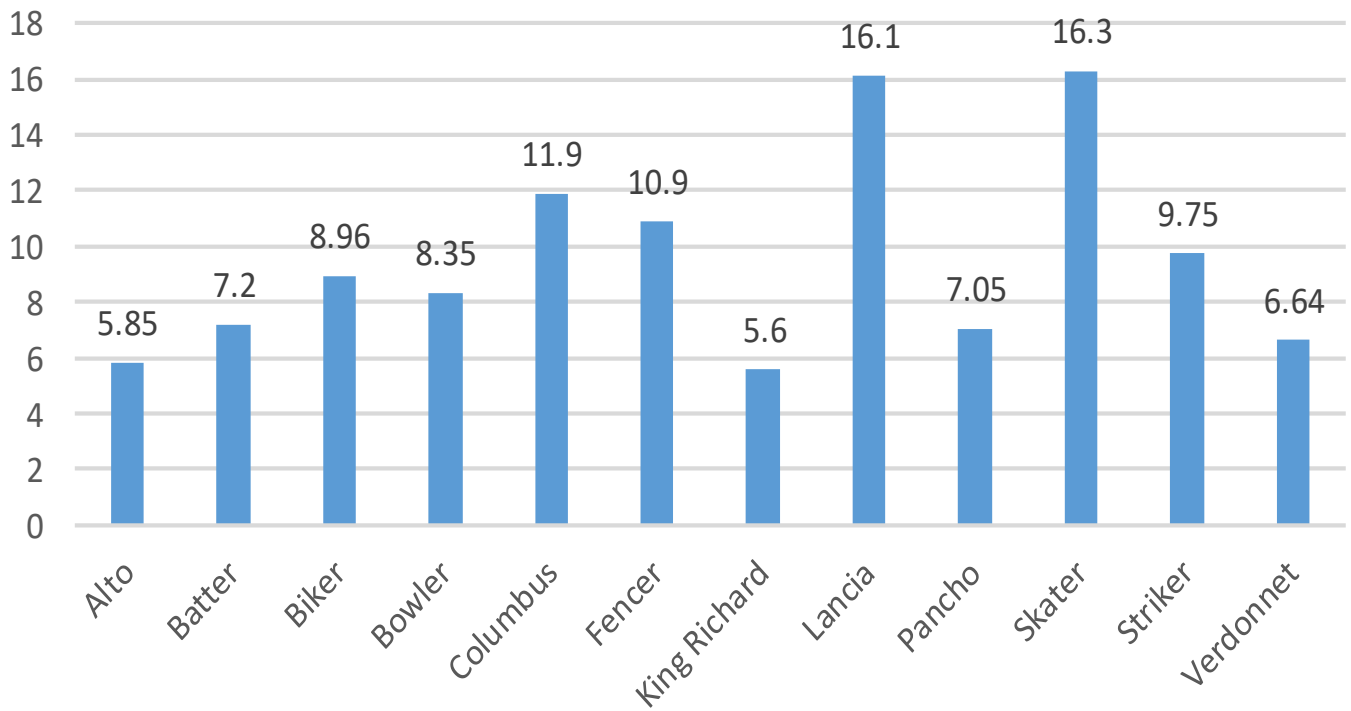
- From Bejo Seeds
- Listed DTM—95 days from transplant
- Actual DTM—80 days from transplant
- 18 inches tall
- 9.75 lbs per 20 leeks
- Medium green color
- No bulbing
- 1.32 inch average diameter



## Verdonnet

- From Adaptive Seeds
- Listed DTM—Not available
- Actual DTM—73 days from transplant
- 12 inches tall
- 6.64 lbs per 20 leeks
- Medium green color
- Slight bulbing

## Summer Leeks Weight (lbs per 20)



# Fall Leeks



## Chinook

- From High Mowing Seeds
- Listed DTM—100 days from transplant
- Actual DTM—117 days from transplant
- 16 inches tall
- 18.95 lbs per 20 leeks
- Medium green color
- No bulbing
- 1.76 inch average diameter
- Highest yielding fall leek



## Comanche

- From Johnny's Selected Seeds
- Listed DTM—115 days from transplant
- Actual DTM—89 days from transplant
- 18 inches tall
- 11.85 lbs per 20 leeks
- Medium green color
- Slight bulbing
- 1.45 inch average diameter
- Showed some disease pressure later in the season

# Fall Leeks



## Curling

- From Bejo Seeds
- Listed DTM—115 days from transplant
- Actual DTM—139 days from transplant
- 16 inches tall
- 13.2 lbs per 20 leeks
- Dark green color
- Slight bulbing
- 1.54 inch average diameter
- Inconsistent size and short



## Defender

- From Johnny's Selected Seeds
- Listed DTM—150 days from transplant
- Actual DTM—139 days from transplant
- 18 inches tall
- 15.3 lbs per 20 leeks
- Dark green color
- Slight bulbing
- 1.87 inch average diameter

# Fall Leeks



## Jaune de Poitou

- From Seed Savers Exchange
- Listed DTM—110 days from transplant
- Actual DTM—158 days from transplant
- 8 inches tall
- 12.3 lbs per 20 leeks
- Light green color
- Severe bulbing
- 2.16 inch average diameter



## Jumper

- From Johnny's Selected Seeds
- Listed DTM—105 days from transplant
- Actual DTM—158 days from transplant
- 16 inches tall
- 15.0 lbs per 20 leeks
- Medium green color
- No bulbing
- 1.63 inch average diameter

# Fall Leeks



## Lancelot

- From Seedway
- Listed DTM—100 days from transplant
- Actual DTM—158 days from transplant
- 18 inches tall
- 15.2 lbs per 20 leeks
- Medium green color
- Slight bulbing
- 1.84 inch average diameter



## Megaton

- From Johnny's Selected Seeds
- Listed DTM—100 days from transplant
- Actual DTM—98 days from transplant
- 15 inches tall
- 13.3 lbs per 20 leeks
- Medium green color
- No bulbing
- 1.53 inch average diameter
- Held extremely well after harvest, until 10/30

# Fall Leeks

## Prizetaker



- From Seed Savers Exchange
- Listed DTM—110 days from transplant
- Actual DTM—139 days from transplant
- 12 inches tall
- 13.2 lbs per 20 leeks
- Medium green color
- Some bulbing
- 1.87 inch average diameter
- Very inconsistent in shape and size
- White striping on leaves

## Rally



- From Bejo Seeds
- Listed DTM—90 days from transplant
- Actual DTM—89 days from transplant
- 18 inches tall
- 11.3 lbs per 20 leeks
- Medium green color
- No bulbing
- 1.24 inch average diameter

# Fall Leeks



## Runner

- From Bejo Seeds
- Listed DTM—96 days from transplant
- Actual DTM—117 days from transplant
- 18 inches tall
- 15.0 lbs per 20 leeks
- Medium green color
- Slight bulbing
- 1.40 inch average diameter
- Showed some disease pressure later in the season



## Surfer

- From Bejo Seeds
- Listed DTM—115 days from transplant
- Actual DTM—134 days from transplant
- 16 inches tall
- 14.1 lbs per 20 leeks
- Dark green color
- No bulbing
- 1.65 inch average diameter



# Fall Leeks

## Tadorna



- From Johnny's Selected Seeds
- Listed DTM—110 days from transplant
- Actual DTM—139 days from transplant
- 18 inches tall
- 16.8 lbs per 20 leeks
- Dark green color
- Some bulbing
- 1.93 inch average diameter
- Some splitting

## Takrima



- From High Mowing Seeds
- Listed DTM—110 days from transplant
- Actual DTM—98 days from transplant
- 16 inches tall
- 14.4 lbs per 20 leeks
- Medium green color
- No bulbing
- 1.48 inch average diameter
- Showed some disease pressure later in the season

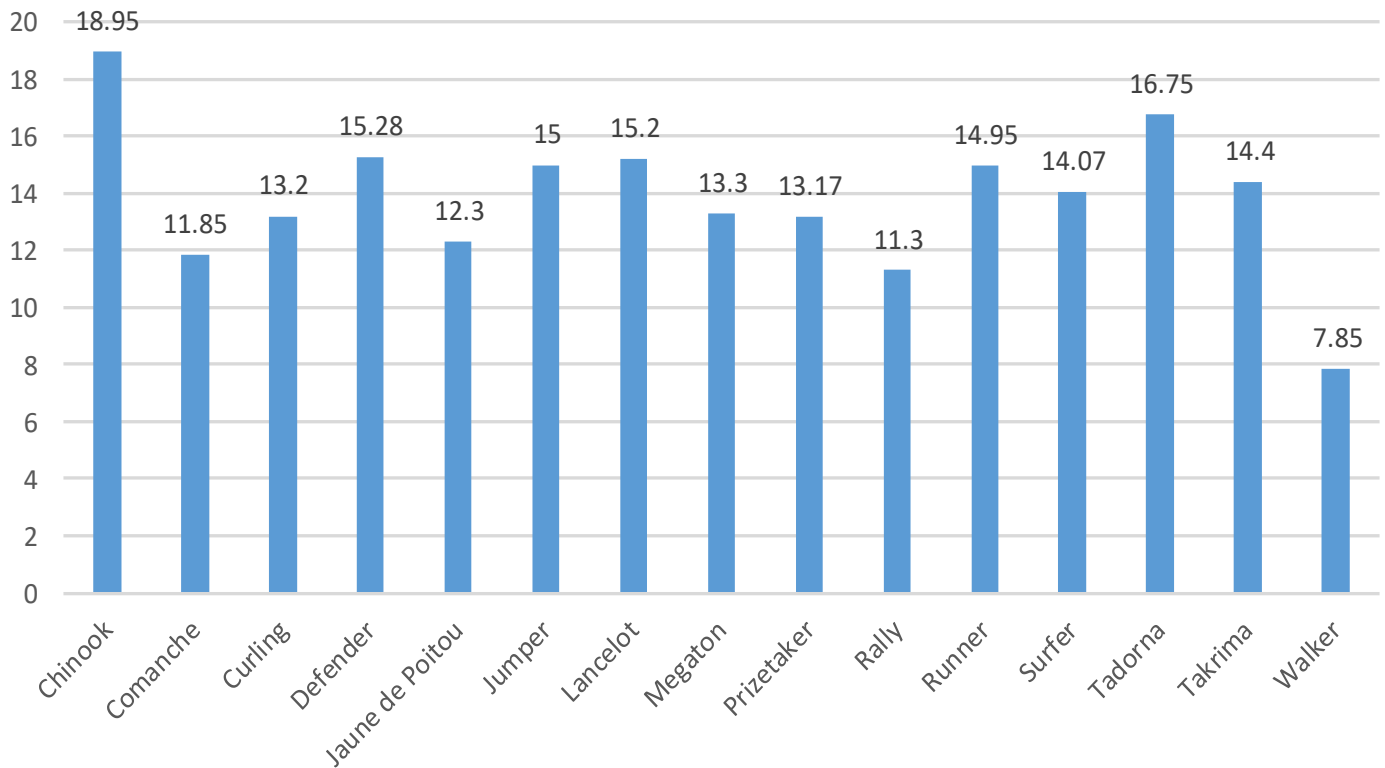
# Fall Leeks



## Walker

- From Bejo Seeds
- Listed DTM—115 days from transplant
- Actual DTM—84 days from transplant
- 15 inches tall
- 7.9 lbs per 20 leeks
- Dark green color
- No bulbing
- 1.09 inch average diameter
- Showed some disease pressure later in the season

Fall Leeks Weight (lbs per 20)



# Winter Leeks



## Bandit

- From Bejo Seeds
- Listed DTM—120 days from transplant
- Actual DTM—84 days from transplant
- 18 inches tall
- 11.3 lbs per 20 leeks
- Dark green color
- Severe bulbing
- 1.41 inch average diameter



## Blue Solaise

- From Wild Garden Seed
- Listed DTM—Not available
- Actual DTM—167 days from transplant
- 12 inches tall
- 10.6 lbs per 20 leeks
- Medium green color
- Some bulbing
- 1.57 inch average diameter
- White splotches on leaves

# Winter Leeks

## Dawn Giant



Dawn Giant

- From Bejo Seeds
- Listed DTM—Not available
- Actual DTM—112 days from transplant
- 18 inches tall
- 16.5 lbs per 20 leeks
- Medium green color
- Slight bulbing
- 1.83 inch average diameter
- Highest yielding winter leek

## Esther Cook



Esther Cook

- From Seed Savers Exchange
- Listed DTM—120 days from transplant
- Actual DTM—167 days from transplant
- 12 inches tall
- 12.2 lbs per 20 leeks
- Medium green color
- No bulbing
- 1.70 inch average diameter
- Highest ALM pressure but nice leek otherwise

# Winter Leeks



## Keeper

- From Bejo Seeds
- Listed DTM—120 days from transplant
- Actual DTM—167 days from transplant
- 18 inches tall
- 16.2 lbs per 20 leeks
- Dark green color
- No bulbing
- 1.73 inch average diameter



## Liege Giant Winter

- From Adaptive Seeds
- Listed DTM—Not available
- Actual DTM—167 days from transplant
- 12 inches tall
- 10.4 lbs per 20 leeks
- Dark green color
- Some bulbing
- 1.54 inch average diameter
- Inconsistent shape, some bulbed, some didn't

# Winter Leeks



## Mechelen Blue Green

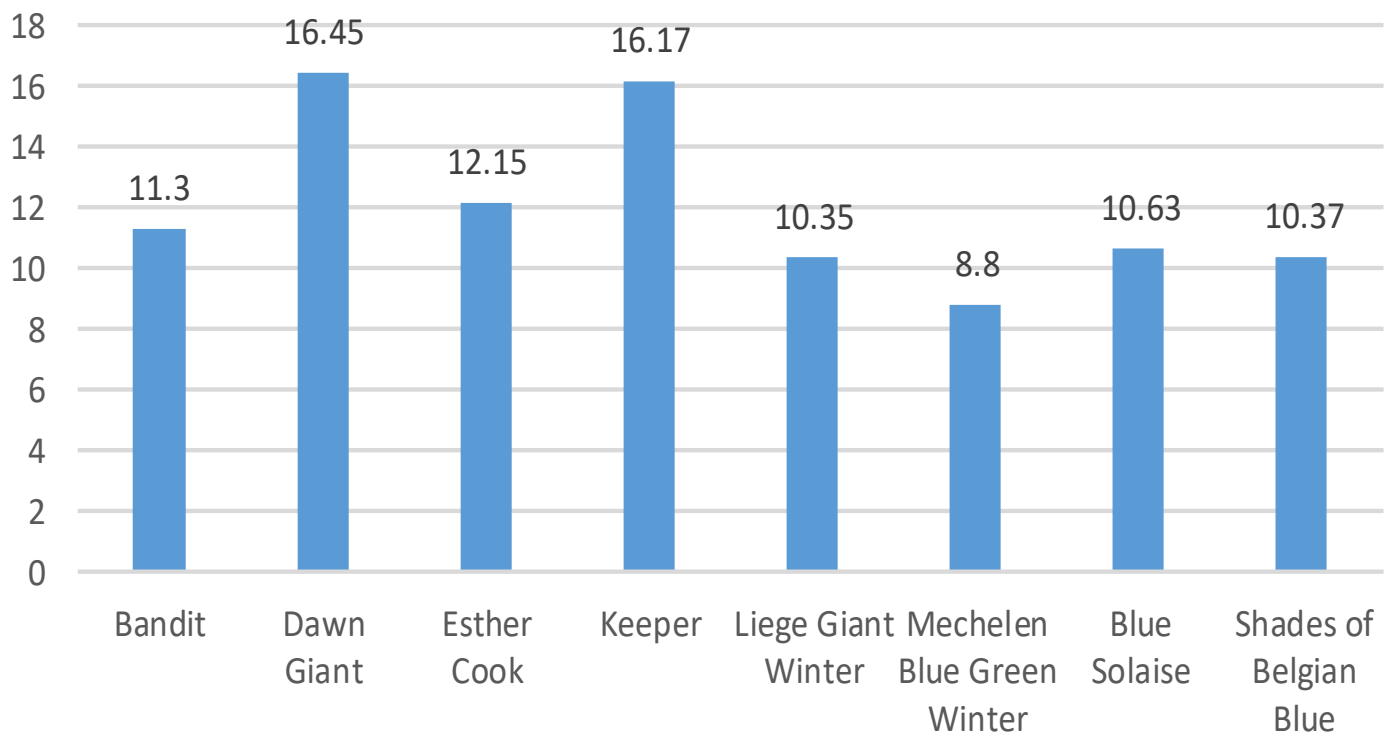
- From Adaptive Seeds
- Listed DTM—Not available
- Actual DTM—167 days from transplant
- 12 inches tall
- 8.8 lbs per 20 leeks
- Dark green color
- Some bulbing
- 1.71 inch average diameter



## Shades of Belgian Blue

- From Wild Garden Seed
- Listed DTM—Not available
- Actual DTM—167 days from transplant
- 12 inches tall
- 10.4 lbs per 20 leeks
- Medium green color
- No bulbing
- 1.60 inch average diameter
- Lots of splitting, lots of layers needed to be removed

## Winter Leeks Weight (lbs per 20)



Thank you to Vitalis Seed, Bejo Seed, High Mowing Seeds, Seed Savers Exchange and Johnny's Selected Seeds for contributing seed to our trial.

Thank you to Philia Farm for hosting the trial.

You can find more information about our program and other work at <https://enych.cce.cornell.edu/>

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.



**Table 1: Variety Information**

Variety	Company	Type	Weight (lbs per 20)	Color
Alto	High Mowing Seeds	Summer	5.9	Light
Bandit	Bejo	Winter	11.3	Dark
Batter	Bejo	Summer	7.2	Dark
Biker	Bejo	Summer	9.0	Dark
Blue Solaise	Wild Garden Seed	Winter	10.6	Medium
Bowler	Bejo	Summer	8.4	Dark
Chinook	High Mowing Seeds	Fall	19.0	Medium
Columbus	Bejo	Summer	11.9	Dark
Comanche	Johnny's Selected Seeds	Fall	11.9	Medium
Curling	Bejo	Fall	13.2	Dark
Dawn Giant	Bejo	Winter	16.5	Medium
Defender	Bejo	Fall	15.3	Dark
Esther Cook	Seed Savers Exchange	Winter	12.2	Medium
Fencer	Bejo	Summer	10.9	Medium
Jaune de Poitou	Seed Savers Exchange	Fall	12.3	Light
Jumper	Johnny's Selected Seeds	Fall	15.0	Medium
Keeper	Bejo	Winter	16.2	Dark
King Richard	Johnny's Selected Seeds	Summer	5.6	Light
Lancelot	Seedway	Fall	15.2	Medium
Lancia	Bejo	Summer	16.1	Medium
Liege Giant Winter	Adaptive Seeds	Winter	10.4	Dark
Mechelen Blue Green	Adaptive Seeds	Winter	8.8	Dark
Megaton	Johnny's Selected Seeds	Fall	13.3	Medium
Pancho	Adaptive Seeds	Summer	7.1	Medium
Prizetaker	Seed Savers Exchange	Fall	13.2	Medium
Rally	Bejo	Fall	11.3	Medium
Runner	Bejo	Fall	15.0	Medium
Shades of Belgian Blue	Wild Garden Seed	Winter	10.4	Medium
Skater	Bejo	Summer	16.3	Dark
Striker	Bejo	Summer	9.8	Medium
Surfer	Bejo	Fall	14.1	Dark
Tadorna	Johnny's Selected Seeds	Fall	16.8	Dark
Takrima	High Mowing Seeds	Fall	14.4	Medium
Verdonnet	Adaptive Seeds	Summer	6.6	Medium
Walker	Bejo	Fall	7.9	Dark



**Table 2: Variety Information Sorted Highest to Lowest Yield**

Variety	Company	Type	Weight (lbs per 20)	Color
Chinook	High Mowing Seeds	Fall	19.0	Medium
Tadorna	Johnny's Selected Seeds	Fall	16.8	Dark
Dawn Giant	Bejo	Winter	16.5	Medium
Skater	Bejo	Summer	16.3	Dark
Keeper	Bejo	Winter	16.2	Dark
Lancia	Bejo	Summer	16.1	Medium
Defender	Bejo	Fall	15.3	Dark
Lancelot	Seedway	Fall	15.2	Medium
Jumper	Johnny's Selected Seeds	Fall	15.0	Medium
Runner	Bejo	Fall	15.0	Medium
Takrima	High Mowing Seeds	Fall	14.4	Medium
Surfer	Bejo	Fall	14.1	Dark
Megaton	Johnny's Selected Seeds	Fall	13.3	Medium
Curling	Bejo	Fall	13.2	Dark
Prizetaker	Seed Savers Exchange	Fall	13.2	Medium
Jaune de Poitou	Seed Savers Exchange	Fall	12.3	Light
Esther Cook	Seed Savers Exchange	Winter	12.2	Medium
Columbus	Bejo	Summer	11.9	Dark
Comanche	Johnny's Selected Seeds	Fall	11.9	Medium
Bandit	Bejo	Winter	11.3	Dark
Rally	Bejo	Fall	11.3	Medium
Fencer	Bejo	Summer	10.9	Medium
Blue Solaise	Wild Garden Seed	Winter	10.6	Medium
Shades of Belgian Blue	Wild Garden Seed	Winter	10.4	Medium
Liege Giant Winter	Adaptive Seeds	Winter	10.4	Dark
Striker	Bejo	Summer	9.8	Medium
Biker	Bejo	Summer	9.0	Dark
Mechelen Blue Green	Adaptive Seeds	Winter	8.8	Dark
Bowler	Bejo	Summer	8.4	Dark
Walker	Bejo	Fall	7.9	Dark
Batter	Bejo	Summer	7.2	Dark
Pancho	Adaptive Seeds	Summer	7.1	Medium
Verdonnet	Adaptive Seeds	Summer	6.6	Medium
Alto	High Mowing Seeds	Summer	5.9	Light
King Richard	Johnny's Selected Seeds	Summer	5.6	Light

**Table 3: Variety Days to Maturity Information**

Variety	Recommended DTM from Transplant	Planting Date	Tranplant to Field Date	Harvest Date	Days to Maturity from Seed	Days to Maturity from Transplant
Alto	85	3/17/2020	5/22/2020	8/10/2020	146	80
Bandit	120	3/17/2020	5/27/2020	8/19/2020	155	84
Batter	120	3/17/2020	5/22/2020	8/10/2020	146	80
Biker	99	3/17/2020	5/22/2020	8/3/2020	139	73
Blue Solaise	N/A	3/17/2020	5/27/2020	11/10/2020	238	167
Bowler	100	3/17/2020	5/22/2020	8/10/2020	146	80
Chinook	100	3/17/2020	5/22/2020	9/16/2020	183	117
Columbus	100	3/17/2020	5/22/2020	8/3/2020	139	73
Comanche	115	3/17/2020	5/22/2020	8/19/2020	155	89
Curling	115	3/17/2020	5/22/2020	10/8/2020	205	139
Dawn Giant	N/A	3/17/2020	5/27/2020	9/16/2020	183	112
Defender	150	3/17/2020	5/22/2020	10/8/2020	205	139
Esther Cook	120	3/17/2020	5/27/2020	11/10/2020	238	167
Fencer	N/A	3/17/2020	5/22/2020	8/28/2020	164	98
Jaune de Poitou	110	3/17/2020	5/22/2020	10/27/2020	224	158
Jumper	105	3/17/2020	5/22/2020	10/27/2020	224	158
Keeper	120	3/17/2020	5/27/2020	11/10/2020	238	167
King Richard	85	3/17/2020	5/22/2020	8/10/2020	146	80
Lancelot	100	3/17/2020	5/22/2020	10/27/2020	224	158
Lancia	98	3/17/2020	5/22/2020	8/28/2020	164	98
Liege Giant Winter	N/A	3/17/2020	5/27/2020	11/10/2020	238	167
Mechelen Blue Green	N/A	3/17/2020	5/27/2020	11/10/2020	238	167
Megaton	100	3/17/2020	5/22/2020	8/28/2020	164	98
Pancho	N/A	3/17/2020	5/22/2020	8/10/2020	146	80
Prizetaker	110	3/17/2020	5/22/2020	10/8/2020	205	139
Rally	90	3/17/2020	5/22/2020	8/19/2020	155	89
Runner	96	3/17/2020	5/22/2020	9/16/2020	183	117
Shades of Belgian Blue	N/A	3/17/2020	5/27/2020	11/10/2020	238	167
Skater	110	3/17/2020	5/22/2020	10/27/2020	224	158
Striker	95	3/17/2020	5/22/2020	8/10/2020	146	80
Surfer	115	3/17/2020	5/27/2020	10/8/2020	205	134
Tadorna	110	3/17/2020	5/22/2020	10/8/2020	205	139
Takrima	110	3/17/2020	5/22/2020	8/28/2020	164	98
Verdonnet	N/A	3/17/2020	5/22/2020	8/3/2020	139	73
Walker	115	3/17/2020	5/27/2020	8/19/2020	155	84

**Table 4: Midseason and Harvest Evaluations**

Variety	Disease pressure (1-5)	Were they uniform?	Height (inches) Eval July 15	Bulbing (1-5, 1 an onion, 5 no bulbing)	Average diameter at harvest
Alto	5	No	18	5	1.24
Bandit	5	Yes	18	2	1.41
Batter	5	Yes	18	5	1.13
Biker	5	Yes	18	5	N/A
Blue Solaise	5	No	12	3	1.57
Bowler	5	Yes	18	5	1.32
Chinook	4	No	16	5	1.76
Columbus	5	Yes	18	5	N/A
Comanche	4	No	18	4	1.45
Curling	5	Yes	16	4	1.54
Dawn Giant	5	Yes	18	4	1.83
Defender	5	Yes	18	4	1.87
Esther Cook	4	No	12	5	1.70
Fencer	5	Yes	14	5	1.55
Jaune de Poitou	5	Yes	8	2	2.16
Jumper	5	Yes	16	5	1.63
Keeper	5	Yes	18	5	1.73
King Richard	5	No	12	5	1.23
Lancelot	5	No	18	4	1.84
Lancia	5	Yes	16	5	1.63
Liege Giant Winter	5	No	12	3	1.54
Mechelen Blue Green	5	No	12	3	1.71
Megaton	5	Yes	15	5	1.53
Pancho	5	No	18	5	1.41
Prizetaker	5	No	12	2	1.87
Rally	5	No	18	5	1.24
Runner	4	No	18	4	1.40
Shades of Belgian Blue	5	No	12	5	1.60
Skater	5	Yes	18	4	1.91
Striker	5	No	18	5	1.32
Surfer	5	Yes	16	5	1.65
Tadorna	5	No	18	3	1.93
Takrima	4	No	16	5	1.48
Verdonnet	5	No	12	4	N/A
Walker	4	Yes	15	5	1.09