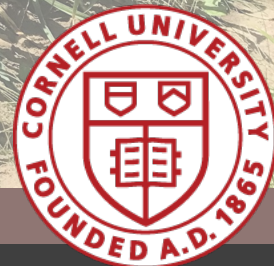


# 2020 Leek Variety Trial

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.

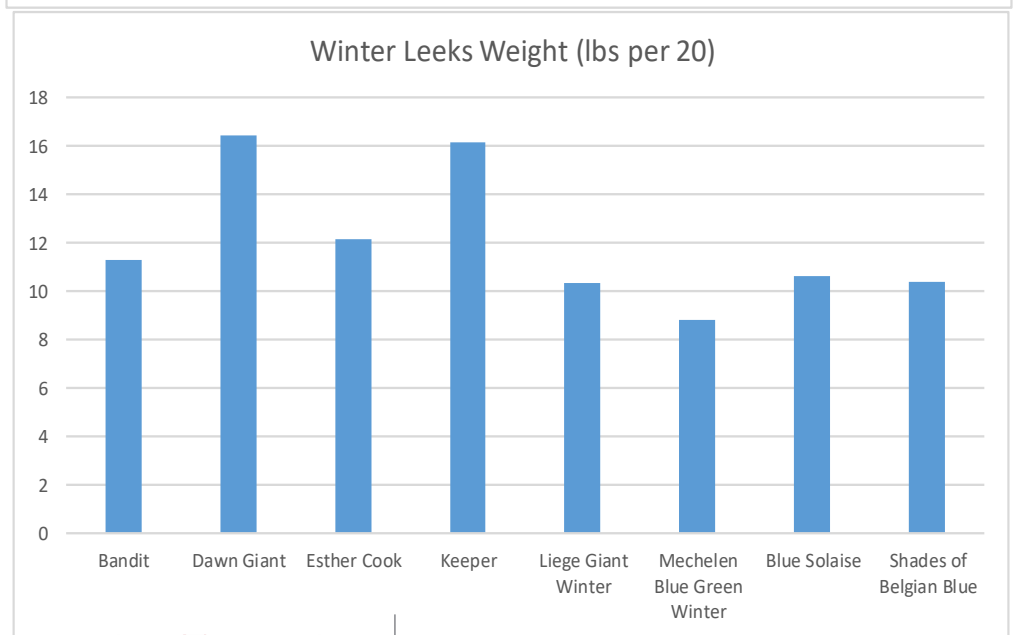
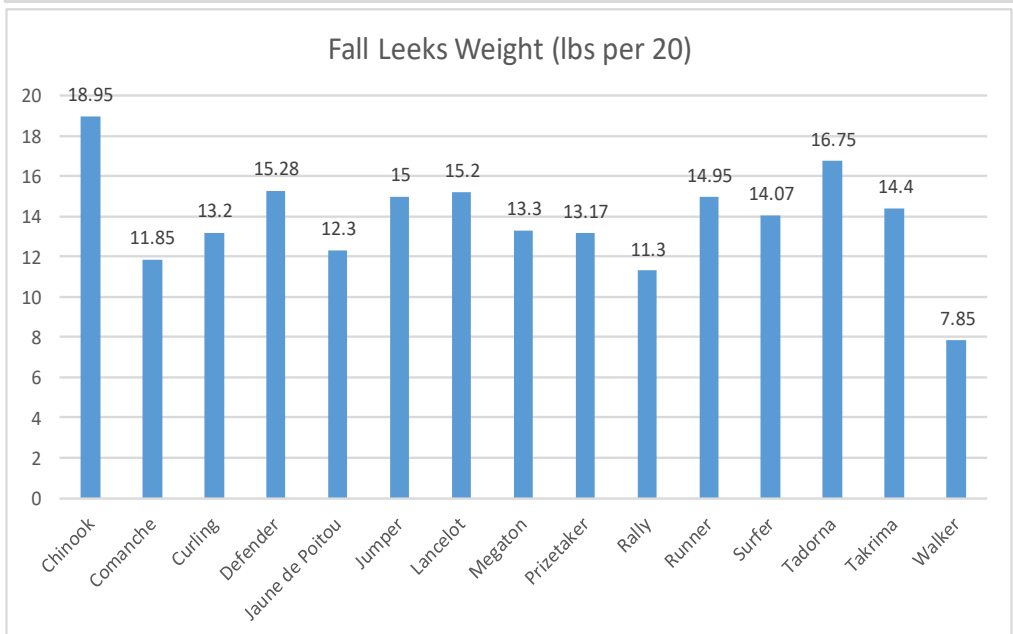
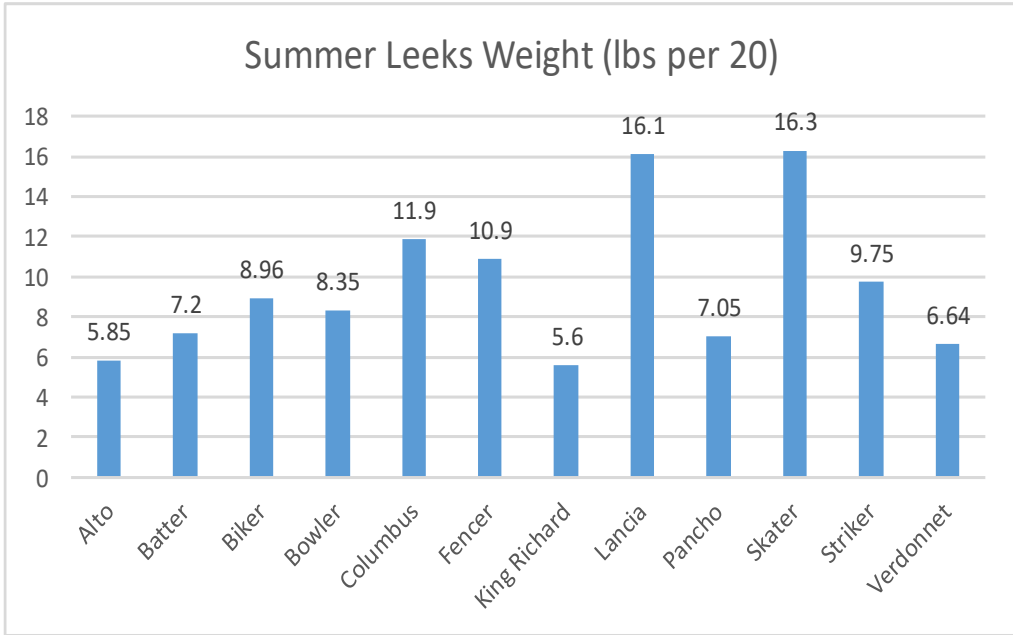
The environmental conditions this season are also noteworthy. We had 32 days where the temperature was over 85°F and 3 inches less rain than average. Disease pressure was light for most of the season, with only a few varieties showing notable Purple Blotch damage. Susceptible varieties were Comanche,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

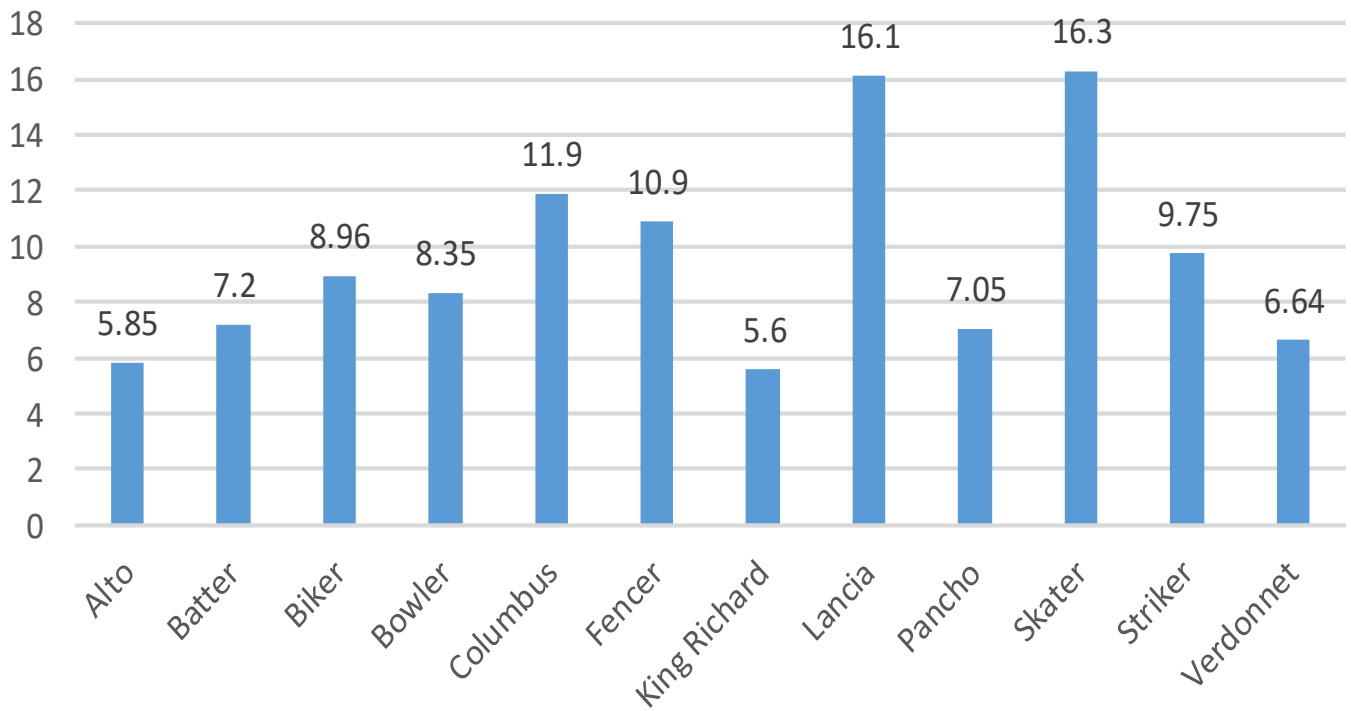
- From Bejo Seeds
- Listed DTM—95 days from transplant
- Actual DTM—80 days from transplant
- 18 inches tall
- 9.75 lbs per 20 leeks
- Medium green color
- No bulbing
- 1.32 inch average diameter



## 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

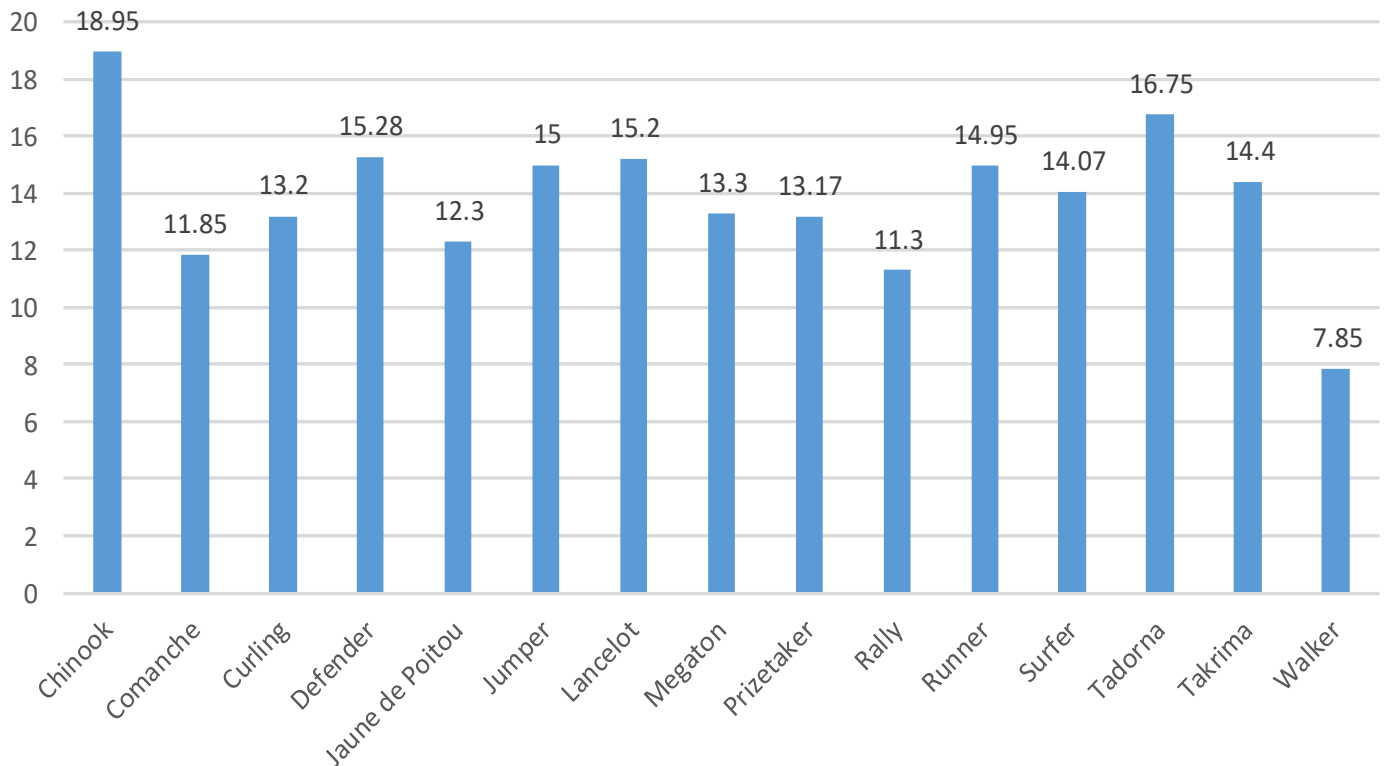
# Fall Leeks



## 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

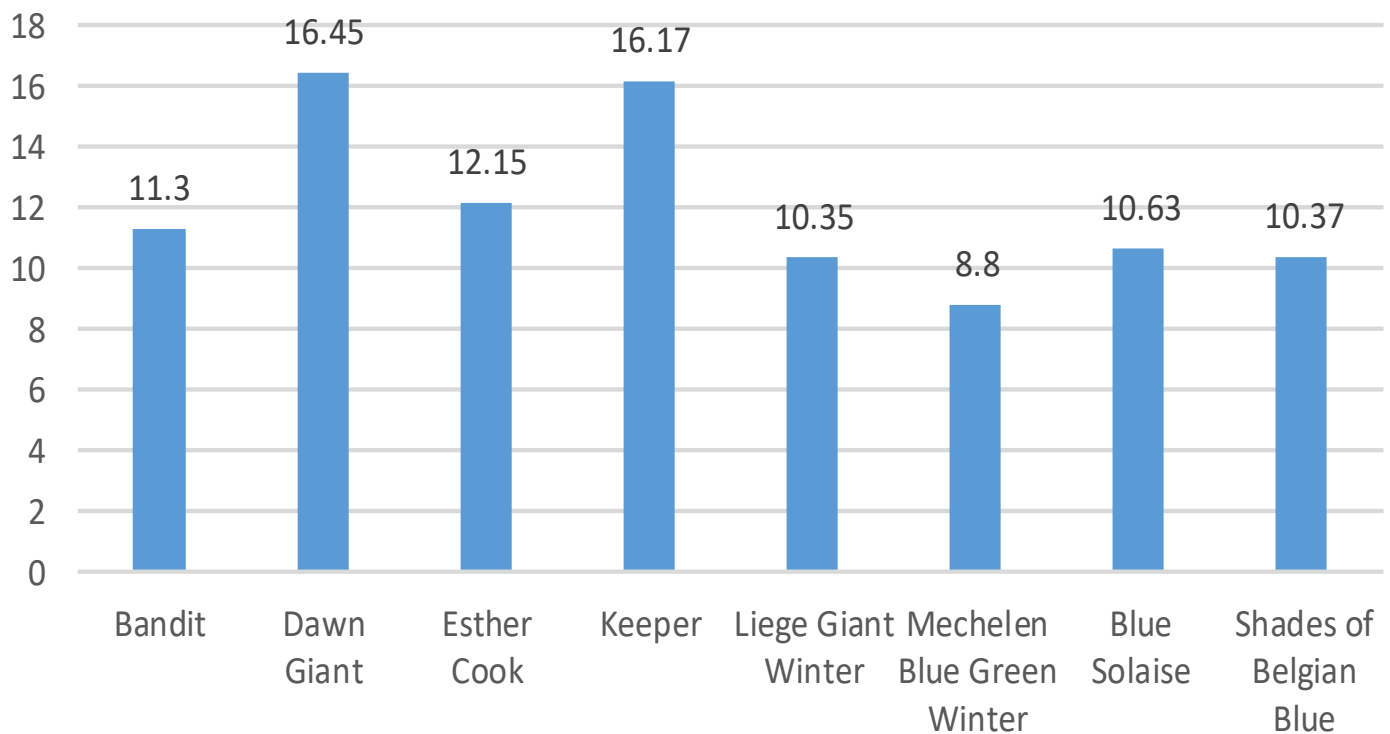
- From Adaptive Seeds
- Listed DTM—Not available
- Actual DTM—167 days from transplant
- 12 inches tall
- 8.8 lbs per 20 leeks
- Dark green color
- Some bulbing
- 1.71 inch average diameter



## 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