Long Island Vinifera Winegrape Variety Trial

White Cultivars

1993 - 2023

Cornell University
Cooperative Extension
of Suffolk County

Alice Wise, Sr. Issue Educator/Viticulturist
Cornell Cooperative Extension of Suffolk County
Riverhead, Long Island, NY

Photo: CCE-SC grape program; fall, 2023

Please contact us

- If you have any questions
- If you need assistance in viewing this presentation

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Many thanks to the crew for all of their hard work.

Front
Bill McGrath
Amanda Gardner

Back
Mark Sisson
Alice Wise

CCE grape program crew

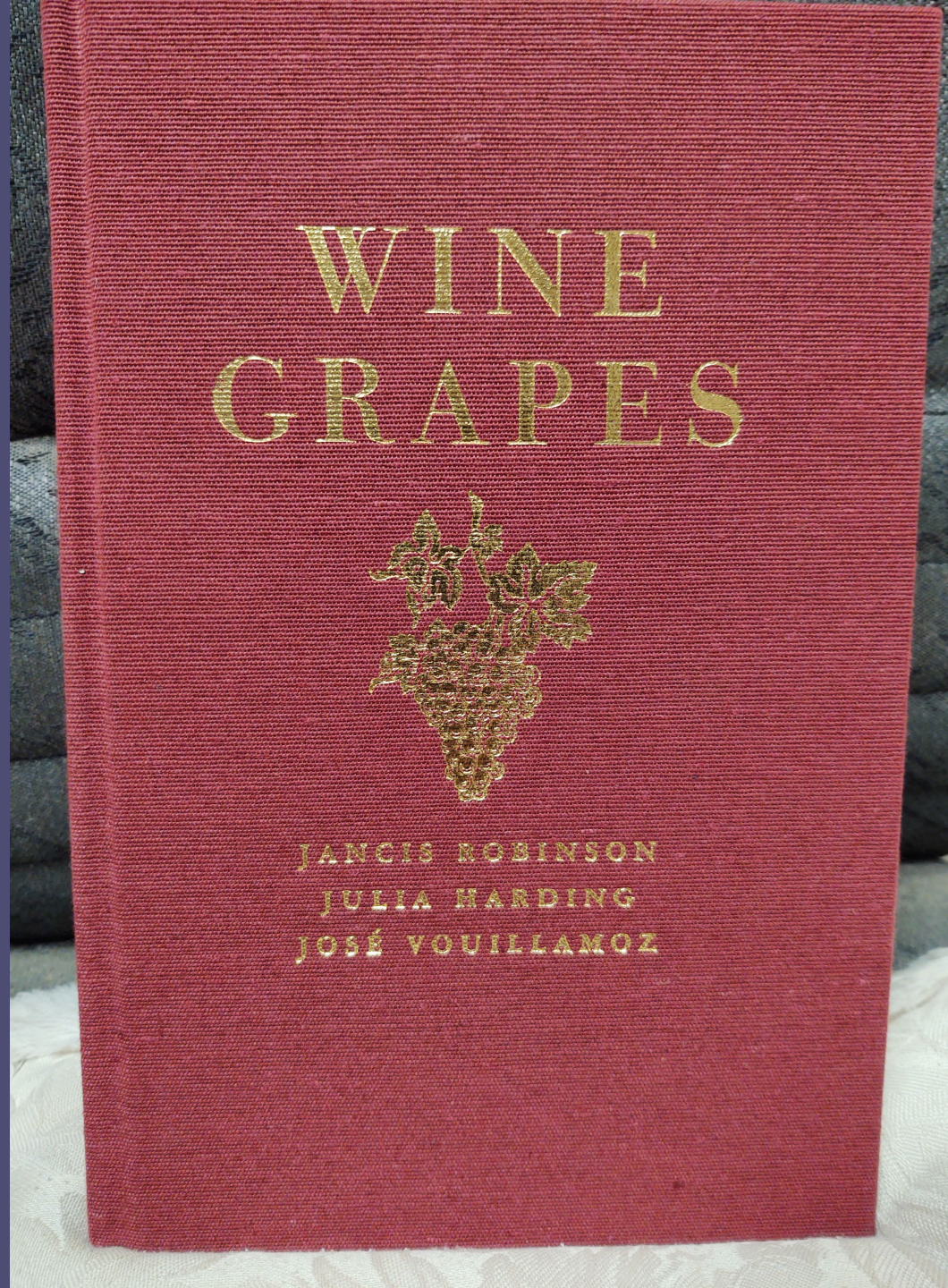
Photo: CCE-SC grape program

Since 2002, the vineyard has been managed through the efforts of
Libby Tarleton, Grape Program Assistant, 2002 - 2015
Alice Wise, Sr. Issue Educator/Viticulturist, 1990 - present
Amanda Gardner, Grape Program Assistant, 2015 - present

Photo: CCE-SC grape program

Variety flavor descriptions were created from the following resources:

- Our own observations
- Comments by industry members
- Wine Grapes (Harper Collins, 2012)
- Wine search engine - www.wine-searcher.com



Variety trial berry tasting, 2022

Photo: CCE-SC grape program

Why variety trials?

- Distinguish your business from other wineries
- New products, trends
- Because mistakes in planting are costly! $30,000+/acre to plant winegrapes

Cornell University Long Island Horticultural Research and Extension Center, Riverhead, NY

Cornell's horticultural research facility on Long Island & location of the research vineyard

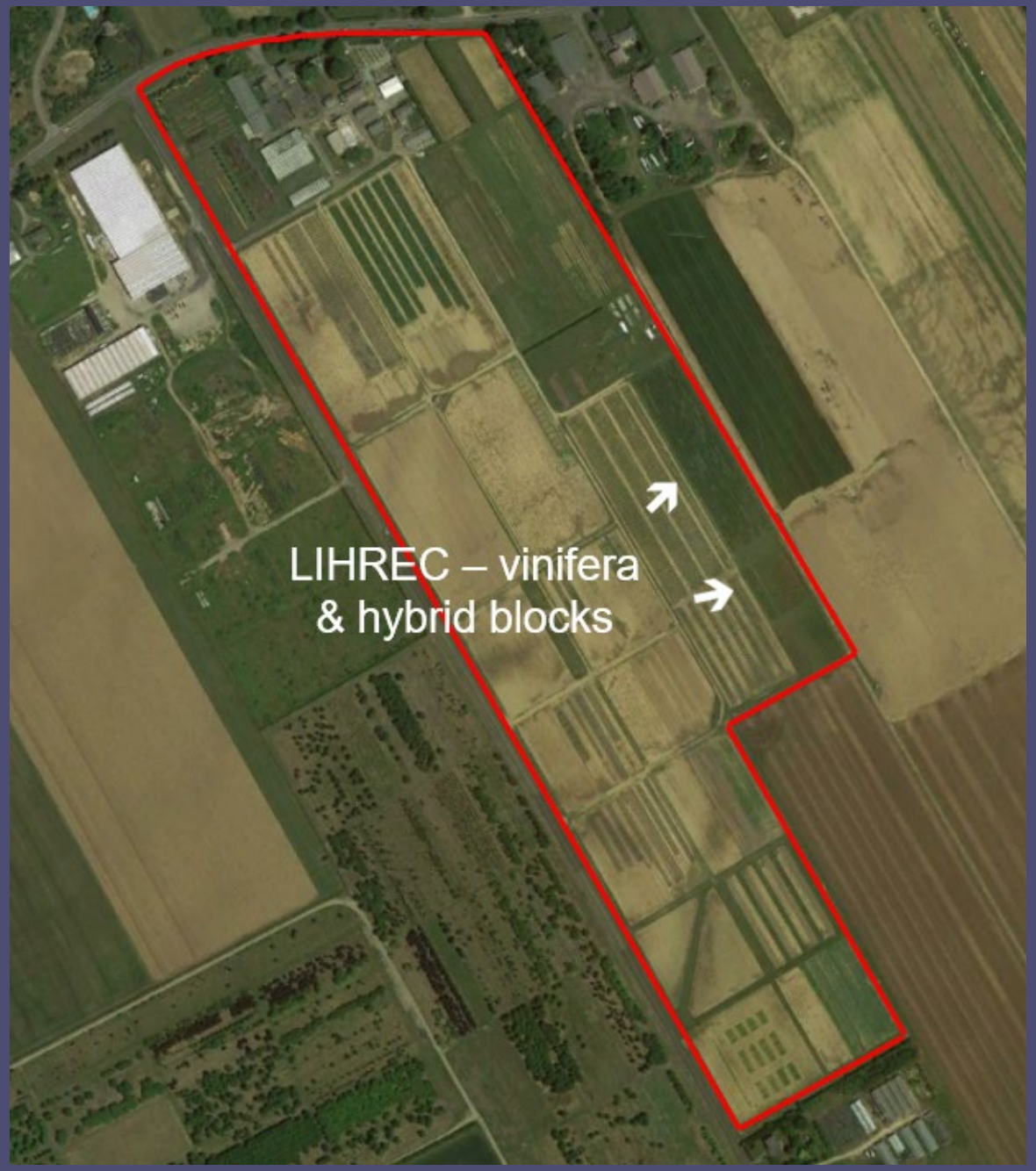


Photo: Google Earth, 2016

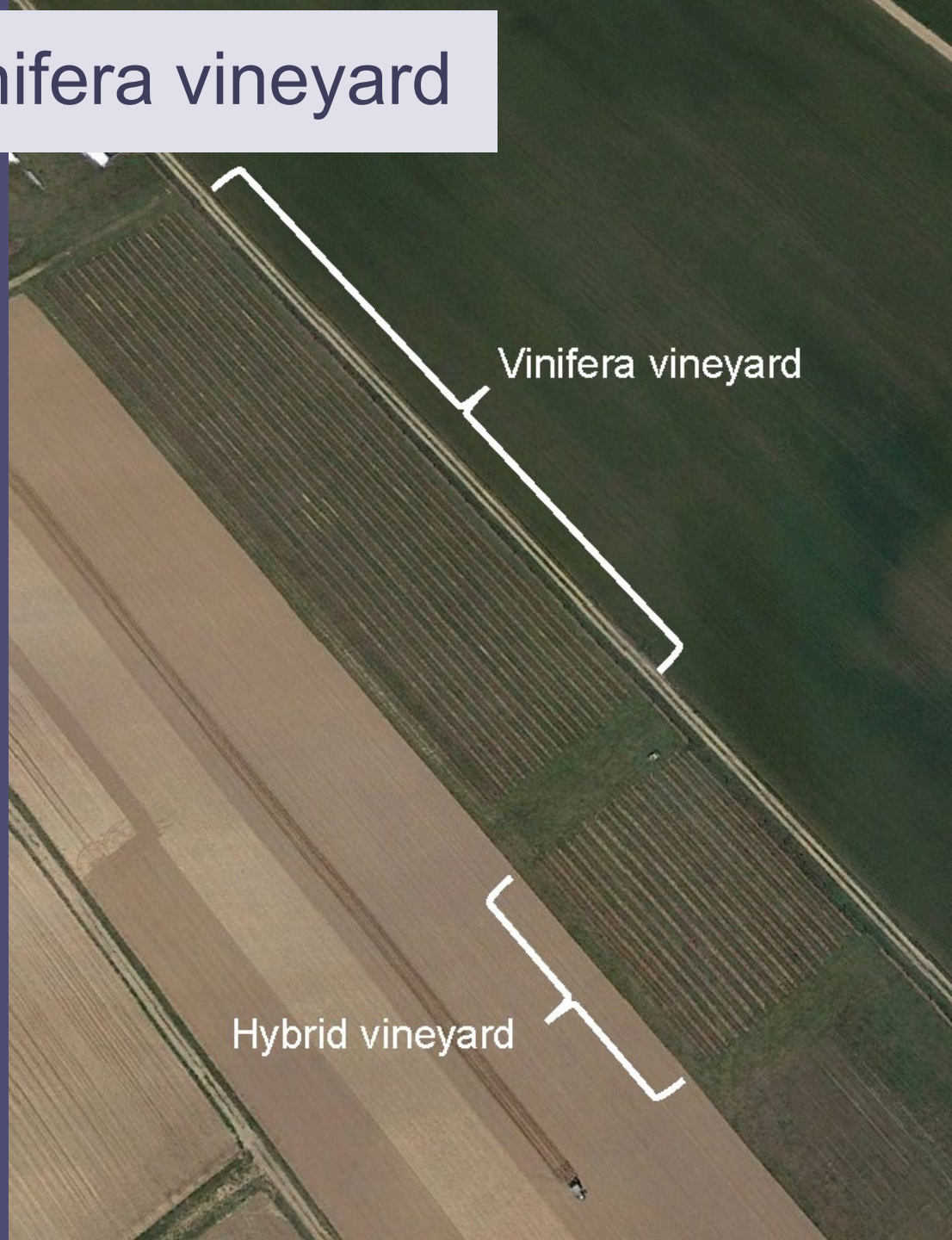
History of the LIHREC vinifera vineyard

In a 1991 survey, growers identified variety evaluation as a research priority.

Planting began in 1993. Originally an evaluation of Chardonnay, Merlot and Cabernet Sauvignon clones, a few additional varieties were included to explore the range of possibilities.

Through the years, poorly performing selections were removed and replaced by promising new varieties.

Photo: Google Earth, 2016



Vinifera variety trial design

Planting started in 1993.

2023 was the 31st and final year of the trial.

34 varieties in 2023

8x6 spacing; VSP trained

Replicated by panel, 5-8 panels/variety; 4 vines/panel

The specific clone is listed for some varieties. For others, the nursery did not provide a clonal designation.

Hybrids were added to LIHREC in a separate block starting in 2005. Performance of hybrids is addressed in a separate PowerPoint presentation.

Photos: CCE-SC grape program

First Harvest 1995

And yes those are still the same lugs!

Last Harvest 2023

Photos: CCE-SC grape program

Early Years of the Vineyard

1993

1994

1995

Photos: CCE-SC grape program

Harvest 2023

Photos: CCE-SC grape program

Alice picks the last cluster of the season and the final cluster of the vinifera trial. Marking the end of a project that spanned 3 decades. It is a research vineyard tradition to photograph the last cluster picked each harvest.

Impacts of herbicide drift

Over the last decade of its existence, this vineyard was periodically damaged by drift from growth regulating herbicides (GRH). Grüner Veltliner, Gewürztraminer, Chardonnay, own-rooted vines, young and weak vines were particularly vulnerable. The least vulnerable was mature, grafted Cabernet Sauvignon. While symptoms on CS were still evident, there was no impact on vine performance.

Damage was particularly severe on many varieties in 2021, impacting shoot growth, yield and ripening. In this situation, data from affected vines was excised from the overall data set. For example, we did not use damaged clusters for assessing berries/cluster or Brix, TA, pH.

Poor set and distorted shoot tip linked to drift damage
Grüner Veltliner, 2021
Photos: CCE-SC grape program

Variety trial goal : assess vineyard performance

Phenology

Canopy characteristics

Yield

Cluster size and shape

Fruit flavors, balance

Ripening over multiple seasons

Susceptibility to diseases, particularly cluster rots

Photo: CCE-SC grape program

As you read through this presentation …

- ENTAV – Etablissement National Technique pour l'Amérlioration de la Viticulture, an organization dedicated to viticultural improvement located in southern France.
- INRA – Institut National de la Recherche Agronomique, the primary research agency of the Ministry of Agriculture in France.
- Selection of varieties and clones for this trial took place starting in the 1990's. In some cases, better varieties/clones are now available.
- Many of the clone were selected before certification programs were in full swing. Some of the clones were put through the UC Davis certification program and now have FPS (Foundation Plant Services) designated numbers. See FPS, https://fps.ucdavis.edu/fgrmain.cfm/, for more information.

Albariño

Region where it is most commonly grown: Galicia, Spain

Sept. 2023

Photos: CCE-SC grape program

Albariño / 101-14

Harvested
2009 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 29	Sept. 21	Sept. 21	Sept. 27
Brix	22.7	19.8	20.9	19.3
TA, g/l	8.1	8.4	8.1	9.3
pH	3.05	3.28	3.26	3.11
Cluster wt - lbs	0.21	0.30	0.31	0.23
Berries/cluster	78.2	122.2	114.7	89.0

Viticulture

- GvPLaV+ infected – likely the cause of loose clusters and shy canopy.
- No cluster rot

Fruit/wine flavors

- Fruity & floral
- Lemongrass, honeysuckle, orange, grapefruit, peach

Aligoté

Region where it is most commonly grown: Burgundy

Sept. 2021

Photos: CCE-SC grape program

Aligoté 1 / 3309

Harvested
1996 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 28	Sept. 20	Sept. 20	Sept. 27
Brix	19.5	18.6	19.1	18.7
TA, g/l	7.2	6.9	6.6	7.2
pH	3.13	3.12	3.51	3.21
Cluster wt - lbs	0.66	0.54	0.55	0.52
Berries/cluster	160.1	148.8	146.8	133.0

Viticulture

- Large, compact clusters
- Productive - cluster thinning necessary
- Cluster rot a challenge in wet years

Fruit/wine flavors

- Tart, lemon, citrus
- Often combined with crème de cassis, making kir, an apértif wine

Arneis

Region where it is most commonly grown: Piedmont

Photos: CCE-SC grape program

Arneis / 101-14

Harvested
2015 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 29	Sept. 22	Sept. 21	Sept. 27
Brix	22.8	19.0	22.7	19.7
TA, g/l	6.6	5.7	5.4	7.2
pH	3.24	3.34	3.29	3.22
Cluster wt - lbs	0.57	0.55	0.45	0.55
Berries/cluster	136.4	152.1	144.7	158.9

Viticulture

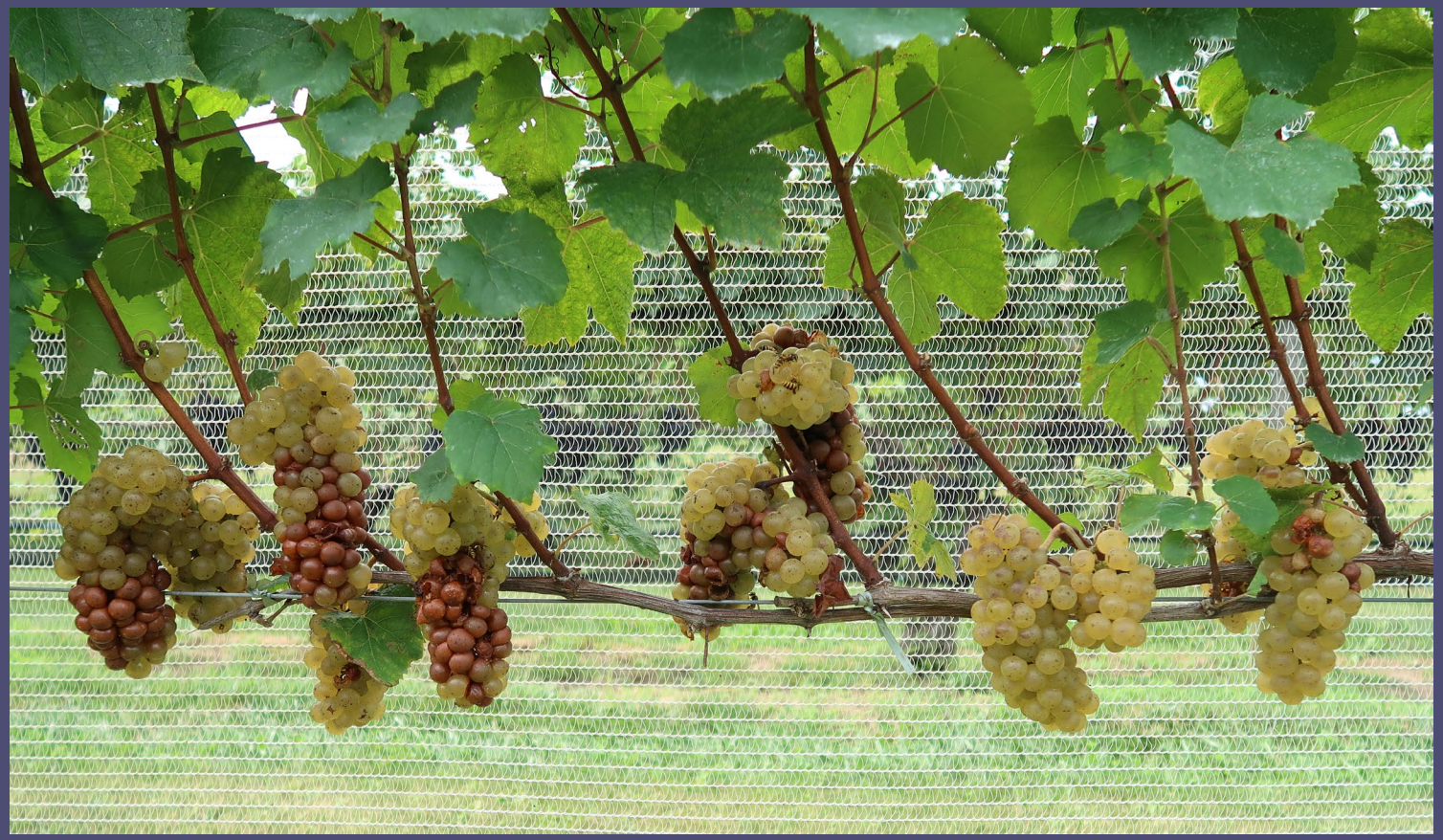
- Small-med berries
- Large, compact clusters
- Lean vines
- Productive - required cluster thinning
- Slightly susceptible to cluster rot

Fruit/wine flavors

- Full bodied, aromatic
- Tree fruit, ripe pears, floral, can be slightly herbaceous

Auxerrois

Region where it is most commonly grown: Alsace



Sept. 2023

Photos: CCE-SC grape program

Auxerrois 45 / 101-14

Harvested
2011 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 17	Sept. 14	Sept. 19	Sept. 15
Brix	20.0	19.4	20.2	18.8
TA, g/l	6.9	6.0	4.2	5.4
pH	3.30	3.29	3.51	3.29
Cluster wt - lbs	0.48	0.45	0.46	0.50
Berries/cluster	114.8	116.8	129.7	152.6

Viticulture

- Productive vines
- Medium clusters, medium berries
- Prone to Botrytis and sour rot
- Cluster rot/weather often dictated harvest date; earlier than Chardonnay

Fruit/wine flavors

- Sibling of Chardonnay
- Typically low acid
- Rich honey flavors, peach

Photo: CCE-SC grape program

Chardonnay
clones in the trial

Regions where it is most commonly grown: Burgundy, grown worldwide

Clone no.	Original source	Harvested	Fruit description
5	Martini Vineyard, Carneros CA	1995 - 2023	Big clustered, higher acid Apple, melon, crisp
15	Prosser, WA	1997 - 2023	Smaller, looser clusters Apple, melon
17	Robert Young Vineyard, CA	1996 - 2023	Good fruit quality Pear, mineral
25	Geisenheim, Germany	1996 - 2003	Big clustered, apple, melon, green apple acidity
76	ENTAV INRA - Dijon	1995 - 2023	Mineral, nutty, almond, cashew, long finish
78	ENTAV INRA - Dijon	1995 - 2023	Mineral, earthy, complex; reportedly a sparkling wine clone
95	ENTAV INRA - Dijon	1996 - 2023	More flinty, austere vs. others
96	ENTAV INRA - Dijon	1995 - 2023	Mineral, nutty, almond, cashew, long finish

Comparison of Chardonnay Clones

Photo: CCE-SC grape program

Photo Labels:
Clone # /
Rootstock #

Chardonnay 5 / 3309

	2020	2021	2022	2023
Harvest date	Oct. 6	Sept. 29	Sept. 27	Sept. 28
Brix	22.3	20.0	20.6	19.3
TA, g/l	10.80	6.75	7.80	9.00
pH	3.13	3.22	3.42	3.20
Cluster wt - lbs	0.43	0.50	0.60	0.59
Berries/cluster	125.8	153.0	198.3	162.9

Chardonnay 17 / 3309

	2020	2021	2022	2023
Harvest date	Oct. 6	Sept. 29	Sept. 27	Sept. 28
Brix	22.3	19.8	21.1	18.9
TA, g/l	8.30	6.30	6.30	8.40
pH	3.23	3.38	3.48	3.34
Cluster wt - lbs	0.27	0.31	0.33	0.31
Berries/cluster	76.9	108.6	106.3	108.4

Chardonnay 76 / 3309

	2020	2021	2022	2023
Harvest date	Oct. 1	Sept. 28	Sept. 28	Sept. 27
Brix	21.7	No data	20.9	19.4
TA, g/l	7.7	No data	7.8	7.5
pH	3.13	No data	3.37	3.26
Cluster wt - lbs	0.28	0.37	0.33	0.33
Berries/cluster	81.0	No data	124.6	111.2

Chardonnay 96 / 3309

	2020	2021	2022	2023
Harvest date	Oct. 1	Sept. 28	Sept. 28	Sept. 27
Brix	21.4	19.9	21.1	19.4
TA, g/l	7.5	5.1	6.3	7.5
pH	3.17	3.56	3.43	3.22
Cluster wt - lbs	0.37	0.44	0.44	0.39
Berries/cluster	97.7	130.0	141.1	119.1

Chardonnay clones removed from trial

Clone 18 - Harvest 1996

Clone 16 - Harvest 1996

Clone 6 - Harvest 1995

Clone no.	Original source	Harvested	Challenge
6	CA, Martini Carneros	1995 - 2003	Similar to cl.5
16	Australia	1995 - 1998	Extremely poor set every year
18	Rauscedo, Italy	1996 - 2003	Neutral flavors
20	Conegliano, Italy	1996 - 2003	Neutral flavors
352	L'Espiguette, France	1997 - 2003	Irregular set; citrus, lemon, prominent acidity
809	ENTAV INRA	2008 - 2017	Good flavors, muscat, but irregular cropping

Photos: CCE-SC grape program

Many Chardonnay clones were replicated on 3309, 101-14 and grown as own-rooted vines.

Complete yield component data for Chardonnay clones can be found on the CCE-Suffolk Grape Program website:

https://ccesuffolk.org/agriculture/grape-program/grape-research-and-extension

Comparison Between Rootstocks

3309 vs 101-14

Photo: CCE-SC grape program

Photo Labels:
Clone # /
Rootstock #

Comparison Between Rootstocks

Own Rooted vs 3309

Photo: CCE-SC grape program

Photo Labels:
Clone # /
Rootstock #

Gewürztraminer

Regions where it is commonly grown: Northeastern France, worldwide

Photos: CCE-SC grape program

Gewürz-traminer 1 / 3309

Harvested
1996 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 21	Sept. 14	Sept. 20	Sept. 22
Brix	21.3	19.6	21.1	19.0
TA, g/l	6.30	4.95	6.30	6.60
pH	3.26	3.80	3.64	3.38
Cluster wt - lbs	0.22	0.18	0.27	0.26
Berries/cluster	98.9	68.8	98.4	81.0

Viticulture

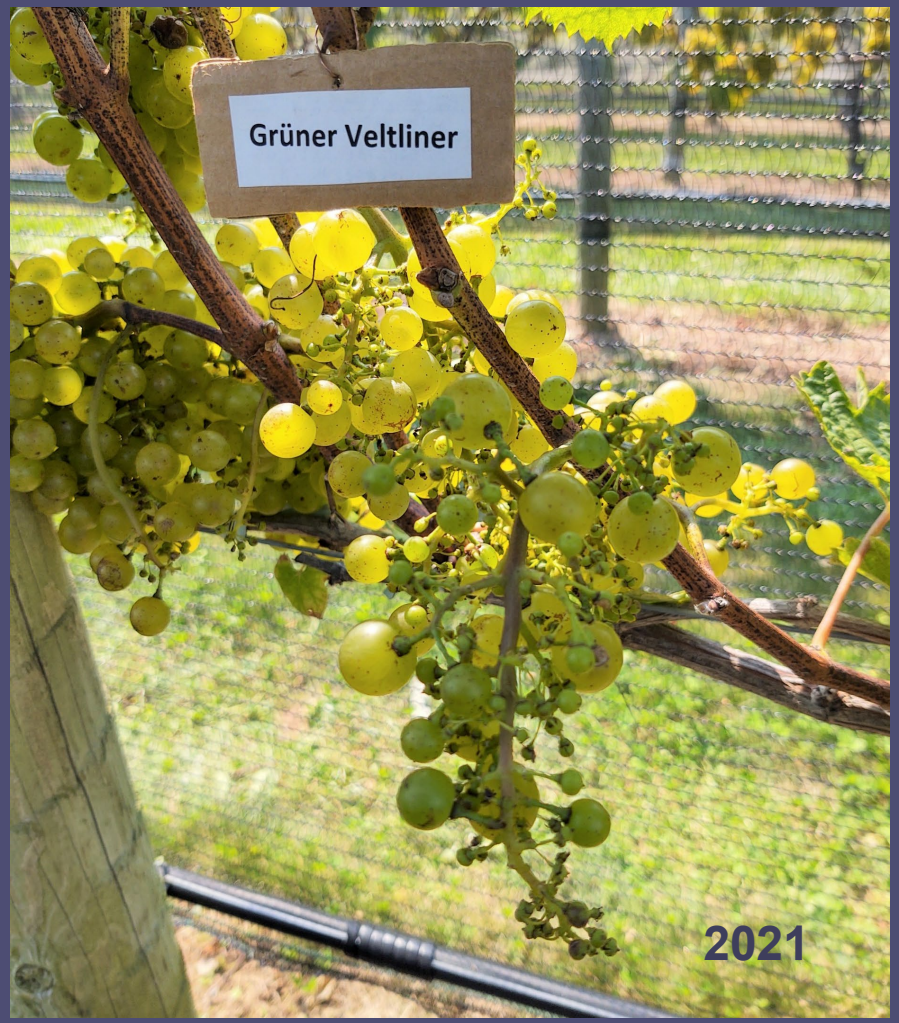
- Sensitive to GR herbicide drift
- Irregular cropping from year to year
- Cluster rot susceptible
- Shoot thinning essential – lots of sterile shoots

Fruit/wine flavors

- Dry to sweet wines
- Flavors vary widely spicy, tropical fruit, stone fruit, rose, lychee, ginger

Grüner Veltliner

Region where it is most commonly grown: Austria



Impact of GR herbicide drift

Photos: CCE-SC grape program

Grüner Veltliner / 101-14

Harvested
2011 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 28	Sept. 14	Sept. 19	Sept. 22
Brix	23.2	19.2	20.8	19.0
TA, g/l	5.6	7.2	5.7	6.9
pH	3.33	3.23	3.47	3.22
Cluster wt - lbs	0.86	0.35	0.74	0.84
Berries/cluster	208.0	120.0	184.8	207.3

Viticulture

- Sensitive to GR herbicide drift
- Small vines with big clusters
- Cluster thinning necessary

Fruit/wine flavors

- Mineral, citrus, sometimes spicy flavors

Inzolia

Regions where it is most commonly grown:
Siciliy, Tuscany

Inzolia / 3309

Harvested
1997 - 1998

	1997	1998
Harvest date	Oct. 13	Sept. 28
Brix	23.0	18.6
TA, g/l	8.6	7.5
pH	3.25	2.95
Cluster wt - lbs	0.96	0.99
Berries/cluster	183.7	166.1

Viticulture

- Large berries, large clusters
- Required cluster thinning
- Berries scarred by sunburn, oil or both
- Leggy vines, poor wood ripening

Fruit/wine flavors

- Floral, herbal, nutty

Malvasia Bianca

Region where it is most commonly grown: Alsace

Bill with large Malvasia cluster, 2021
Photos: CCE-SC grape program

Malvasia Bianca 3 / 101-14

Harvested
1997 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 21	Sept. 15	Sept. 20	Sept. 12
Brix	21.3	18.5	20.9	18.9
TA, g/l	6.2	7.5	5.7	8.4
pH	3.22	3.15	3.53	3.06
Cluster wt - lbs	0.85	0.87	0.65	0.72
Berries/cluster	132.5	128.0	125.4	128.7

Viticulture

- Has many clones
- Small vines, big clusters, big berries
- Irregular yields from year to year; vines often had many sterile shoots

Fruit/wine flavors

- Flavors vary by clone
- Aromatic, rich, smooth, muscaty grapefruit, honeysuckle

Moscato Giallo

Region where it is most commonly grown: northern Italy

Sept. 2021

Photos: CCE-SC grape program

Moscato Giallo / 3309

Harvested 2015 - 2022

	2019	2020	2021	2022
Harvest date	Sept. 30	Sept. 28	Sept. 15	Sept. 19
Brix	20.8	19.8	18.0	18.0
TA, g/l	6.3	7.2	8.4	6.0
pH	3.39	3.26	3.16	3.40
Cluster wt - lbs	0.50	0.60	0.74	0.47
Berries/cluster	103.5	92.3	147.0	99.6

Viticulture

- Crown gall came in on baby vines
- Vines struggled to fill the trellis
- Large, pale yellow, waxy, thick-skinned berries
- Often poor periderm development made pruning a challenge
- Declining yields – vines pulled after 2022 harvest

Fruit/wine flavors

- Tropical fruit, citrus.
- Spice, grapey, musky, aromatic

Muscat Blanc

Regions where it is most commonly grown:
Europe, U.S., Australia

Sept. 1996
Photos: CCE-SC grape program

Muscat Blanc 1 / 3309

Harvested 1996 - 2003

	2000	2001	2002	2003
Harvest date	Oct. 26	Sept. 24	Oct. 1	Oct. 8
Brix	No data	18.2	19.0	17.5
TA, g/l	No data	6.30	7.50	9.75
pH	No data	3.42	3.25	3.11
Cluster wt - lbs	0.84	0.47	0.73	0.53
Berries/cluster	134.1	75.4	145.8	100.2

Viticulture

- Large, cylindrical, compact clusters
- Crushed, split berries common
- Susceptible to cluster rot even in dry harvests
- Slightly vigorous vines

Fruit/wine flavors

- Muscat, orange, citrus, pear; more complex vs. Muscat Ottonel
- Sweet tasting even at lower Brix

Muscat Ottonel

Region where it is most commonly grown:
Alsace; eastern Europe

Sept. 2021 Photos: CCE-SC grape program

Muscat Ottonel cl.1 / 3309

Harvested
1996 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 21	Sept. 14	Sept. 20	Sept. 12
Brix	20.9	18.8	20.0	18.7
TA, g/l	5.9	5.1	4.5	5.7
pH	3.26	3.39	3.74	3.25
Cluster wt - lbs	0.24	0.36	0.33	0.25
Berries/cluster	61.8	61.0	77.5	54.6

Viticulture

- Early ripening
- Small-medium clusters, large berries
- Low to moderate susceptibility to cluster rot
- Irregular yields from year to year
- Small vines especially in dry years

Fruit/wine flavors

- Very aromatic at crush
- Low acids
- Simple fruity, muscat flavors

Petit Manseng

Region where it is most commonly grown: southwest France

Photos: CCE-SC grape program

Petit Manseng / 101-14

Harvested
2011 - 2023

	2020	2021	2022	2023
Harvest date	Oct. 20	Oct. 20	Oct. 19	Oct. 24
Brix	27.4	24.2	26.3	23.1
TA, g/l	10.5	10.5	9.9	14.1
pH	2.71	2.86	2.99	2.58
Cluster wt - lbs	0.29	0.36	0.42	0.33
Berries/cluster	136.0	163.5	162.7	151.9

Viticulture

- Late ripening
- Small, thick-skinned berries
- Loose clusters; no cluster rot

Fruit/wine flavors

- High Brix, high acid common
- Rich, tropical flavors
- Used for late harvest wine

Pinot Gris cl.146

Region where it is most commonly grown:
grown worldwide, notably in France and Italy

Chimera, common on P. Gris

Photo: CCE-SC grape program

Pinot Gris
146 / 3309

Harvested
1996 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 21	Sept. 14	Sept. 20	Sept. 21
Brix	20.8	19.7	21.2	19.4
TA, g/l	6.90	5.40	5.25	6.00
pH	3.17	3.47	3.57	3.42
Cluster wt - lbs	0.33	0.33	0.30	0.28
Berries/cluster	117.6	107.2	105.1	101.3

Viticulture

- Consistent yields, ripening
- Usually required cluster thinning
- Susceptible to sour rot

Fruit/wine flavors

- Versatile in winemaking
- Rich, aromatic to neutral early drinking wines

Pinot Gris Clone 152 was also grown in this trial and had numbers similar to 146.

See the CCE Suffolk Grape Website for the data:
https://ccesuffolk.org/agriculture/grape-program/grape-research-and-extension

Rkatsiteli

Region where it is most commonly grown:
Georgia, Ukraine, Bulgaria

Erect shoots, May 2023

Photos: CCE-SC grape program

Rkatsiteli / 3309

Harvested
2021 - 2023

	2021	2022	2023
Harvest date	Sept. 29	Sept. 21	Oct. 10
Brix	18.8	19.2	No data
TA, g/l	5.4	7.2	9.0
pH	3.00	3.05	2.90
Cluster wt - lbs	0.59	0.63	0.68
Berries/cluster	121.6	155.1	149.2

Viticulture

- First crop in 2021
- Very erect shoot growth
- Long, cylindrical clusters; no cluster rot

Fruit/wine flavors

- Apple, peach, versatile
- Makes high quality wine in the Finger Lakes

Sauvignon Blanc

Region where it is most commonly grown:
Bordeaux; grown worldwide

2021
Photos: CCE-SC grape program

Sauvignon Blanc 1 / 3309

Harvested
1997 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 28	Sept. 21	Sept. 19	Sept. 21
Brix	23.7	20.3	22.2	20.0
TA, g/l	7.5	6.9	6.9	7.5
pH	3.11	3.19	3.25	3.10
Cluster wt - lbs	0.29	0.41	0.36	0.36
Berries/cluster	102.7	124.9	117.2	115.7

Viticulture

- Consistent yields, ripening
- Small-medium, compact clusters
- Often requires cluster thinning
- Susceptible to sour rot
- Often has vigorous canopy

Fruit/wine flavors

- Versatile in winemaking
- Green aromas – grass, leaves, gooseberries
- Flavors zesty, gooseberry

Sauvignon Blanc 376 / 101-14

Harvested
2008 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 28	Sept. 21	Sept. 19	Sept. 21
Brix	23.3	19.4	22.4	19.9
TA, g/l	6.9	6.3	5.7	7.2
pH	3.12	3.34	3.44	3.19
Cluster wt - lbs	0.30	0.36	0.35	0.37
Berries/cluster	100.7	122.2	112.0	114.6

Sauvignon Blanc 530 / 101-14

Harvested
2008 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 28	Sept. 21	Sept. 19	Sept. 21
Brix	23.9	19.7	22.3	19.7
TA, g/l	6.3	6.0	5.7	7.8
pH	3.13	3.23	3.41	3.09
Cluster wt - lbs	0.26	0.34	0.32	0.33
Berries/cluster	99.8	115.0	126.9	120.9

Comparison of Sauvignon Blanc Clones

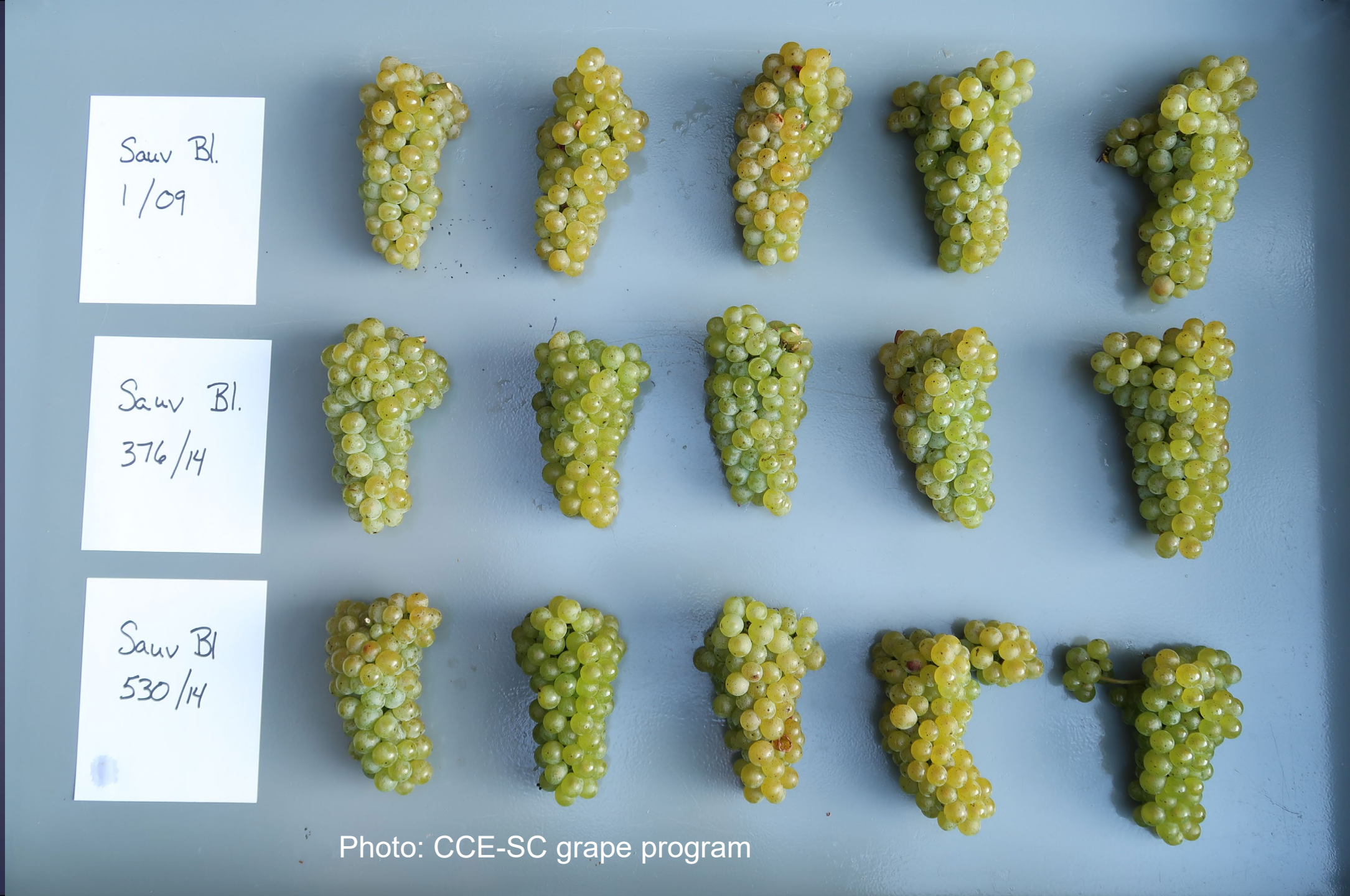


Photo: CCE-SC grape program

Photo Labels:
Clone # /
Rootstock #

Photos: CCE-SC grape program

Semillon

Region where it is most commonly grown:
Bordeaux

Vines displayed virus-like symptoms
but consistently tested negative

Semillon 2 / 3309

Harvested
2000 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 28	Sept. 21	Sept. 20	Sept. 27
Brix	20.3	19.1	21.0	19.7
TA, g/l	7.1	6.3	6.6	6.3
pH	3.15	3.05	3.33	3.12
Cluster wt - lbs	0.43	0.51	0.40	0.50
Berries/cluster	125.7	127.0	102.7	125.1

Viticulture

- Large clusters, large berries
- Slightly susceptible to Botrytis and sour rot
- Berries shriveled just prior to harvest, cause unknown (tested neg. for virus)

Fruit/wine flavors

- Neutral flavors, lemony
- Pectiny berry flesh
- Used in sweet wines and blends with Sauvignon Blanc

Tocai Friulano

Region where it is most commonly grown:
Friuli, northeast Italy

Tocai Friulano drought stress

Photos: CCE-SC grape program

Tocai Friulano 1 / 3309

Harvested
2000 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 28	Sept. 21	Sept. 20	Sept. 27
Brix	22.3	19.2	20.1	19.6
TA, g/l	5.4	6.1	4.8	6.6
pH	3.35	3.49	3.62	3.26
Cluster wt - lbs	0.30	0.29	0.31	0.35
Berries/cluster	102.0	93.1	102.6	126.1

Viticulture

- Perennially low crop; slightly better cane vs. spur pruning
- Large canopy in part due to low crop
- Not particularly rot prone
- Among the first in the vineyard to show signs of drought stress

Fruit/wine flavors

- Pear, peach, honey, almond

Trebbiano Toscano

Region where it is most commonly grown: Tuscany
Syn. Ugni Blanc, St. Emilion

Photos: CCE-SC grape program

Oct. 1996 Harvest

Trebbiano Toscano 1 / 3309

Harvested
1996 - 1998

	1996	1997	1998
Harvest date	Oct. 18	Oct. 13	Oct. 7
Brix	16.8	23.0	21.5
TA, g/l	13.4	11.3	9.6
pH	3.11	3.02	3.05
Cluster wt - lbs	1.06	0.47	0.71
Berries/cluster	272.7	131.0	152.6

Viticulture

- Long, cylindrical clusters
- Large berries
- Moderately rot susceptible; late ripening
- Poor wood ripening
- Lots of aerial roots

Fruit/wine flavors

- Light, neutral
- Often blended

Verdejo

Region where it is most commonly grown:
Rueda, Spain

Photos: CCE-SC grape program

Verdejo / 3309

Harvested 2013 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 28	Sept. 14	Sept. 20	Sept. 27
Brix	21.3	19.0	19.9	18.8
TA, g/l	7.8	7.2	5.4	7.5
pH	3.26	3.19	3.52	3.39
Cluster wt - lbs	0.39	0.55	0.54	0.47
Berries/cluster	84.2	138.8	112.2	106.8

Viticulture

- Capable of high quality fruit
- Thin skinned berries
- Compact clusters
- Susceptible to cluster rot

Fruit/wine flavors

- Versatile – table, sparkling, fortified wines
- Often high acid, rich, smooth, almond, aromatic

Vermentino

Photos: CCE-SC grape program

Region where it is most commonly grown:
Northern Italy, southern France

Amanda with 2.5 lb cluster, 2019

Vermentino / 5BB

Harvested
2015 - 2023

	2020	2021	2022	2023
Harvest date	Sept. 28	Sept. 29	Sept. 21	Sept. 21
Brix	22.8	18.8	19.5	No data
TA, g/l	12.60	7.35	7.20	10.50
pH	3.18	3.24	3.44	3.05
Cluster wt - lbs	0.86	0.68	0.47	0.95
Berries/cluster	123.8	103.9	75.6	130.0

Viticulture

- Crown gall, likely related to 5BB
- Irregular cropping
- Large berries
- Wide range in cluster size from very small to very large

Fruit/wine flavors

- Aromatic, crisp, floral, mineral
- Tree fruit, grapefruit , lime

Vernaccia

Region where it is most commonly grown: Tuscany

Sept. 1997

Photo: CCE-SC grape program

Vernaccia 1 / 3309

Harvested
1997 - 1998

	1997	1998
Harvest date	Oct. 13	Sept. 21
Brix	21.5	17.5
TA, g/l	9.8	8.9
pH	3.09	3.04
Cluster wt - lbs	0.55	0.54
Berries/cluster	169.3	158.5

Viticulture

- Name used for ≥ 6 cultivars
- Unclear which specific cv. was grown at LIHREC
- Highly rot susceptible
- Productive, required cluster thinning

Fruit/wine flavors

- Neutral, floral, citrus, crisp

Viognier

Region where it is most commonly grown: Rhône region, France

Photo:
CCE-SC
Grape program
2010

Viognier 1 / 3309

Harvested
1997 - 2015

	2012	2013	2014	2015
Harvest date	Sept. 17	Sept. 26	Sept. 24	Sept. 15
Brix	20.9	24.1	22.8	23.1
TA, g/l	8.9	7.7	7.4	5.5
pH	3.06	3.30	3.21	3.45
Cluster wt - lbs	0.22	0.17	0.41	0.38
Berries/cluster	72.5	75.4	117.6	No data

Viticulture

- Often had sterile shoots so low cluster number/vine
- Other clones reportedly better yielding
- No cluster rot
- Late harvest

Fruit/wine flavors

- Rich, full-bodied
- Apricot, peach, gingerbread, honeysuckle, others

Plant Science Day vineyard tour and berry tasting

Sept. 15, 2022

Photo: CCE-SC grape program

Where can I find more information on the trial?

CCE-Suffolk County

Grape Program website

has additional yield component data and PP presentation for white vinifera, red vinifera and hybrids

Cornell Cooperative Extension | Grape Research and Extension

(https://ccesuffolk.org/agriculture/grape-program/grape-research-and-extension)

Photo: CCE-SC grape program

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Slate, the grape program frog, has hung out with us for a few harvests

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Photo: CCE-SC grape program