

New UGA Self-fertile Muscadine Cultivars



Dr. Patrick Conner
UGA-Tifton

'Paulk' Muscadine

- Tested as Ga. 6-2-26.
- 'Supreme' x 'Tara' progeny.
- Tested from 2011 – 2016, released in 2017.
- Named for Mr. Jacob Paulk, founder of Paulk Vineyards.



Berry quality of 'Paulk' muscadine at Tifton Ga., (2012-2016)

Cultivar	Flower type	Berry color	Berry weight (g)	Berry diameter (mm)	Percent soluble solids of all harvests
Paulk	SF	Black	15.5 a	30.2 a	14.2
Supreme	F	Black	15.1 a	29.9 a	14.3
Fry	F	Bronze	11.7 b	27.4 b	14.0
Hall	SF	Bronze	10.2 cd	26.0 cd	14.5
Lane	SF	Black	9.6 d	25.6 d	15.3
Tara	SF	Bronze	10.8 bc	26.4 c	13.9
Sig.			<0.001	<0.001	NS





- Similar appearance to Supreme.
- More prominent lenticels.
- Slightly redder color.
- More consistent berry size, few small berries, few giants.

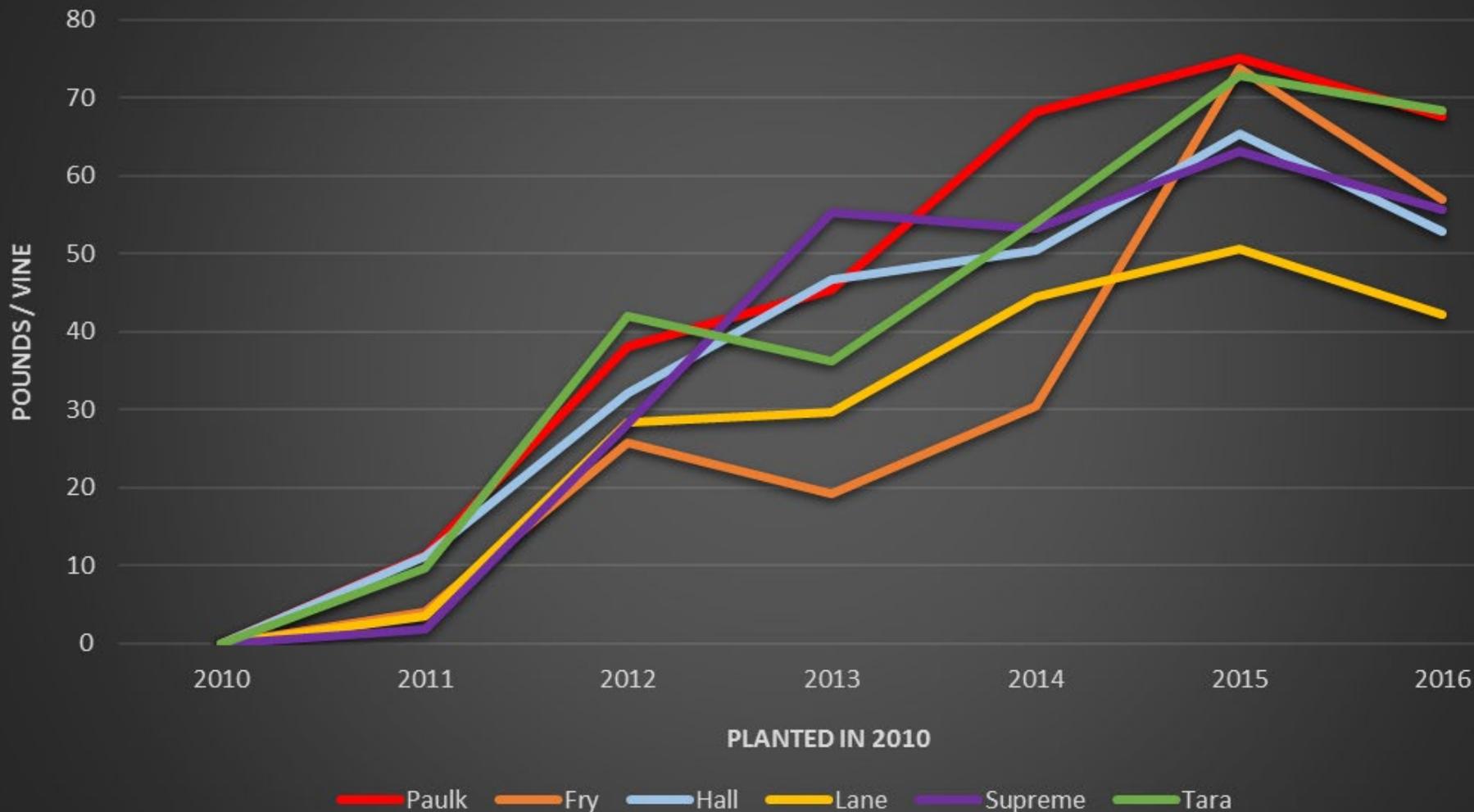
Harvest date of 'Paulk' Muscadine

Cultivar	Avg. day of first harvest	Percent of total yield of first harvest	Percent soluble solids (Brix) of first harvest
Paulk	Aug. 20	65	14.3
Supreme	Aug. 16	60	14.8
Fry	Aug. 15	64	14.3
Hall	July 31	47	14.9
Lane	Aug. 1	56	14.6
Tara	Aug. 2	61	14.2

* Early berries of 'Supreme' could have been picked, 'Paulk' does not have early ripening berries.



Yield (pounds per 10 foot vine) in Tifton 2010-2016



Notes on Yield of 'Paulk' Muscadine

- Good yields in tests.
- Can overproduce with lower quality and delayed harvest.
- Too heavy yield in Wray test in 2015, 'Supreme' had a lot of vine death, no death in 'Paulk'.

Need to thin crop to keep
quality and flavor up in
some years.



'Paulk' Muscadine Berry Quality Tifton, Ga.

Cultivar	% Rot	% Split	% Tear	% Dry
Paulk	8 b	4 c	11 d	85 ab
Supreme	4 c	13 b	29 b	59 c
Fry	16 a	18 a	34 a	48 d
Hall	17 a	3 c	8 d	90 a
Lane	4 c	22 a	23 c	55 c
Tara	10 b	5 c	12 d	83 b
Sig.	<0.001	<0.001	<0.001	<0.001

* More rot in 'Paulk' than most black muscadines, fungicides may be needed.



'Paulk' has long stems, helping to pick clean berries.

Short pedicel



'Supreme'

7.1 mm

Long pedicel



Ga. 6-2-26

11.5 mm



'Paul' Berry Firmness

Cultivar	Firmness ($\text{g}\cdot\text{mm}^{-1}$)	Firmness ($\text{g}\cdot\text{mm}^{-1}$)
	Day 0	Day 10+1
Paulk	240 a	203 b
Supreme	248 a	228 a
Fry	199 b	178 c
Sig.	<0.001	<0.001

Larger numbers = More firm.



Prominent features of 'Paulk' muscadine.

- First self-fertile cultivar where berry size has continued to be large over time.
- Excellent yield potential.
- Good vigor, much better than 'Lane', but still can be overcropped.
- Overcropped berries will lack flavor and be later.

Prominent features of 'Paulk' muscadine.

- Skin and flesh texture similar to traditional muscadines.
- No early berries, you need to have an early black cultivar.
 'Lane' or 'Supreme'
- Much less berry split and tearing than 'Supreme'.
- More disease susceptibility than most blacks, still much better than bronze cultivars.
- Doesn't seem to hold on vine as well as 'Supreme'.
- Unknown cold-hardiness.

‘Paulk’ recommendation

‘Paulk’ is a **potential** self-fertile replacement for ‘Supreme’ for mid to late season. I would plant and prune or thin crops as needed to maintain ideal fruit set. Keep enough ‘Supreme’ to pick over for early sales and perhaps to keep for longer term storage.



‘Hall’ Muscadine

- Tested as Ga. 1-1-48.
- ‘Fry’ x ‘Tara’ progeny.
- Released in 2014.
- Named for Dr. Mel Hall, previous UGA muscadine breeder (1997-2003) who made the cross.



Berry quality of ‘Hall’ muscadine at Tifton, Ga. (2012-2016).

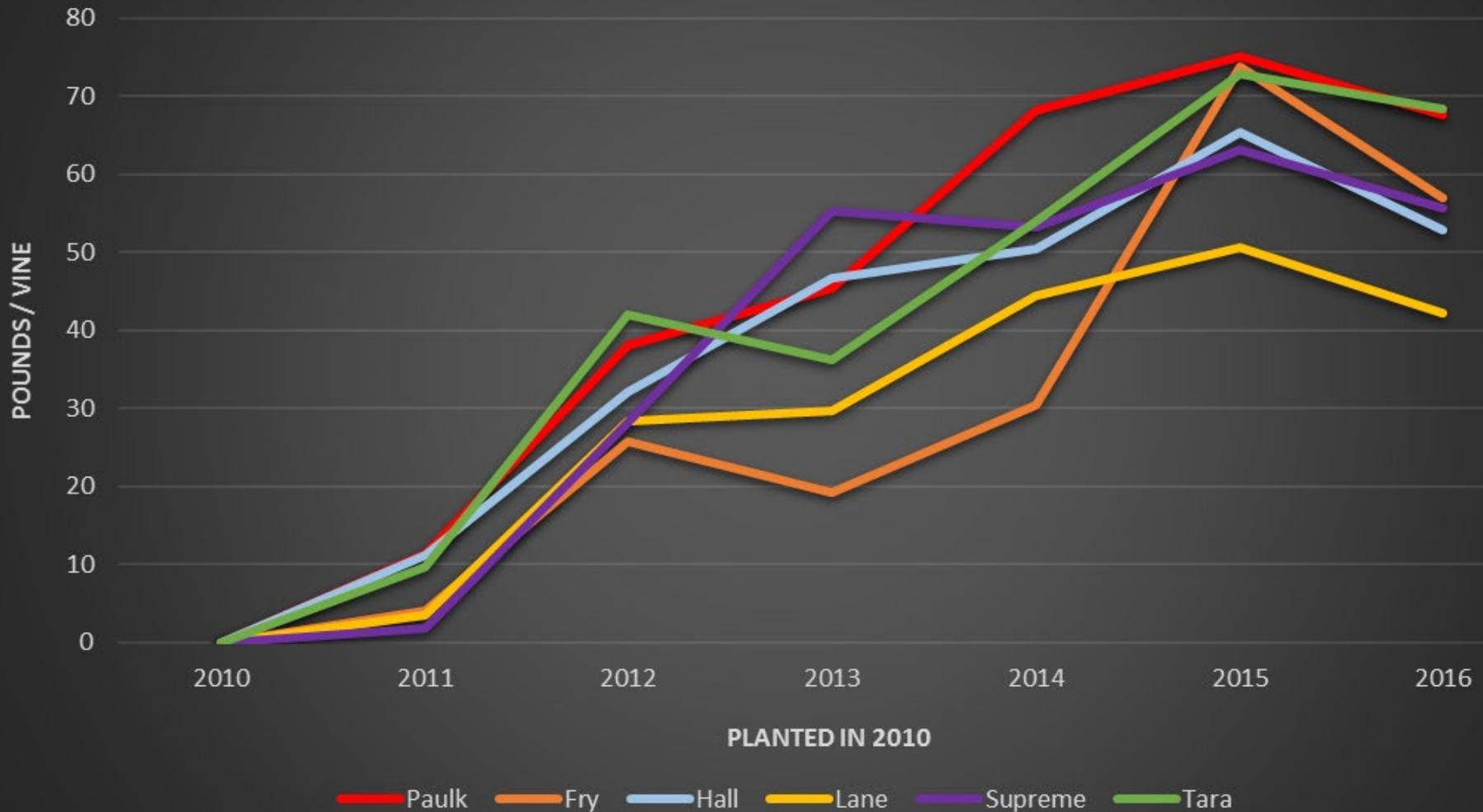
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Early harvest of 'Hall' muscadine at Tifton, Ga. (2012-2014).

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Productivity at Tifton, Ga., first seven years from planting (2010-2016).

Yield (pounds per 10 foot vine) in Tifton 2010-2016



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Tara	10 b	5 c	12 d	83 b
Sig.	<0.001	<0.001	<0.001	<0.001

* 'Hall' picks great with a nice clean scar, its biggest issue is rot and associated cosmetic defects. Like most bronze cultivars it does not hold well on the vine.



Prominent features of 'Hall' muscadine

- 'Hall' has good vigor and productivity, similar to 'Tara'.
- Better brix and flavor than 'Tara'.
- Very good picking scar, low percentage of splits and tears.
- Color is more yellow than other bronze cultivars.
- Size is similar to other self-fertile cultivars.



‘Hall’ recommendation

‘Hall’ is more yellow in color than many other bronze cultivars.

‘Hall’ should be sprayed and picked promptly to minimize rot.

‘Hall’ is recommended as a replacement for ‘Tara’ and as an early season, self-fertile bronze cultivar.



‘Lane’ Muscadine

- Tested as Ga. 5-1-45.
- ‘Supreme’ x ‘Tara’ progeny.
- Released in 2012.
- Named for Dr. Ron Lane, previous UGA muscadine breeder (1969-1996) who released ‘Summit’, ‘Triumph’, ‘Tara’ and ‘Scarlett’.



Berry quality of ‘Lane’ muscadine at Tifton, Ga. (2012-2016).

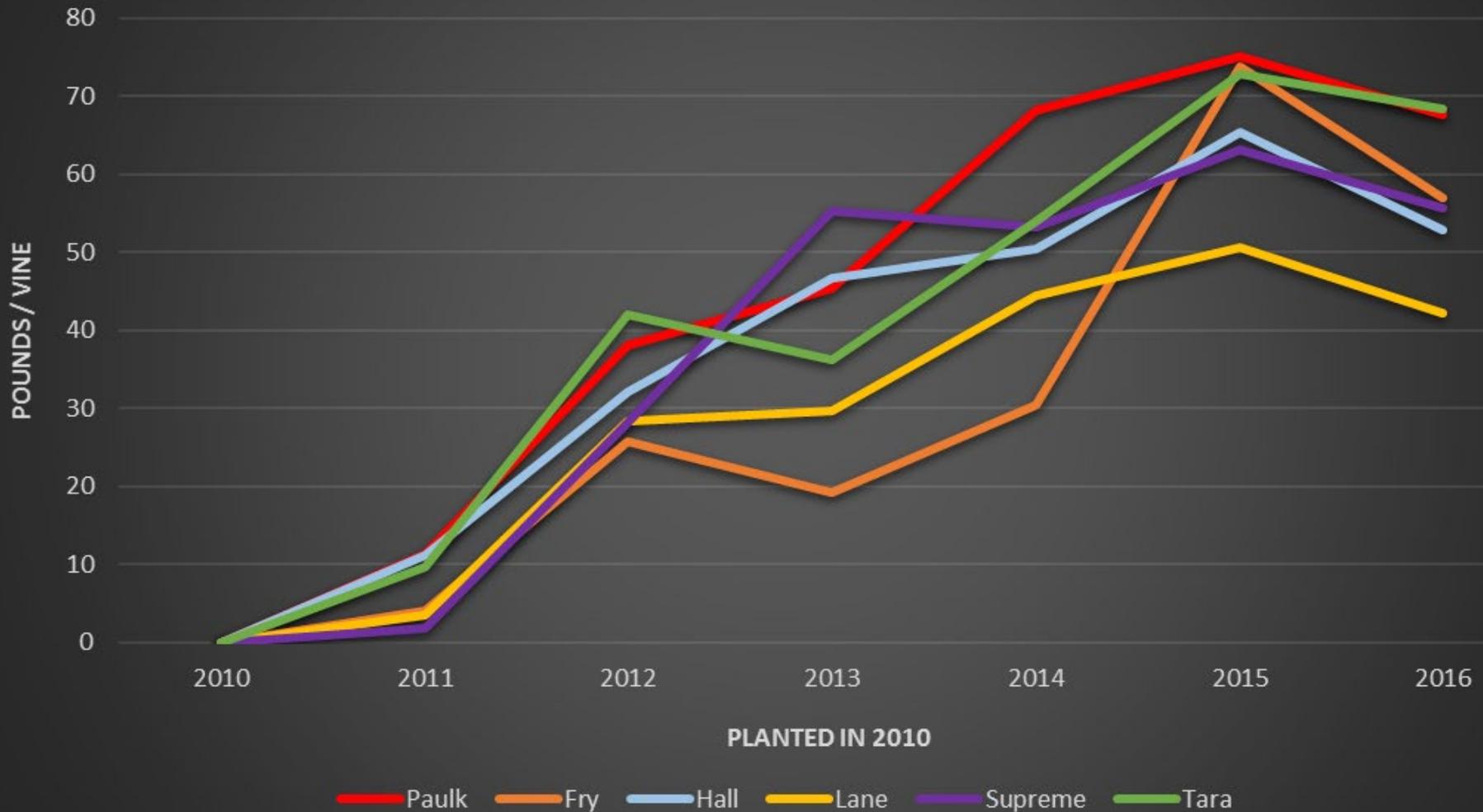
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Yield (pounds per 10 foot vine) in Tifton 2010-2016



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Tara	10 b	5 c	12 d	83 b
Sig.	<0.001	<0.001	<0.001	<0.001

* 'Lane' is difficult to pick cleanly and easily splits.
Avoid picking too early in the day or after a rain.

Prominent features of 'Lane' muscadine

- 'Lane' has moderate (low?) vigor and productivity.
- Vines take a longer time to establish themselves.
- Size is similar to other self-fertile cultivars.
- Currently the only self-fertile early black cultivar.
- Berries have a very firm flesh and hold on the vine well.



Supreme



I Lane



‘Lane’ recommendation

‘Lane’ has moderate yields and can split at the stem scar. We currently recommend planting ‘Lane’ for early season black production and transitioning into ‘Supreme’ for main season black production.



Information Sources

- Google “UGA Muscadine Breeding” for cultivar information.
- Sources of plants
 - Ison’s Nursery
 - Bottoms Nursery
 - Agri-starts