

2022 Watermelon Cultivar Evaluation in Indiana

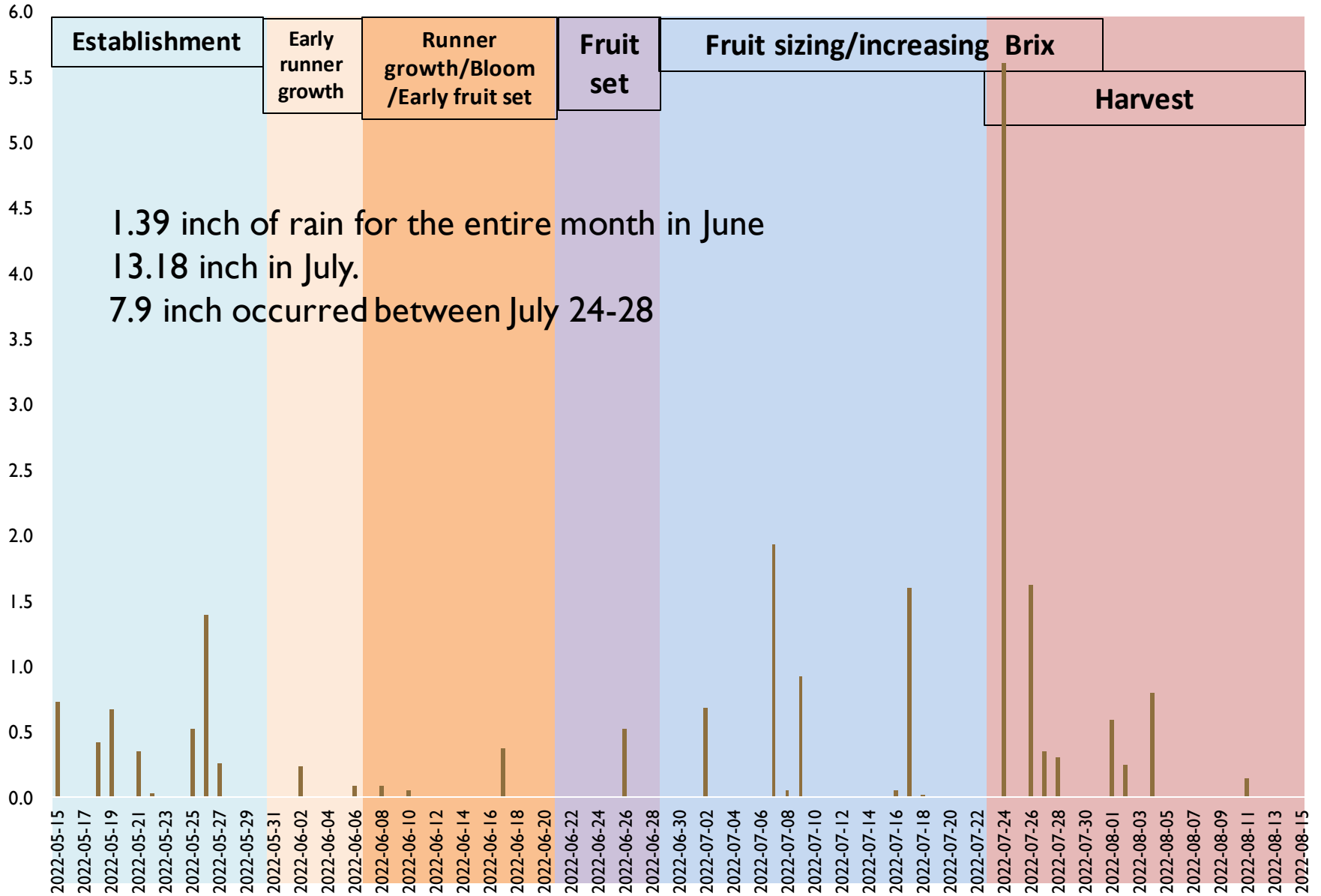
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Horticulture and
Landscape Architecture



Daily Precipitation (inch) in 2022 Watermelon Season



Symptoms observed after the heavy rainfall

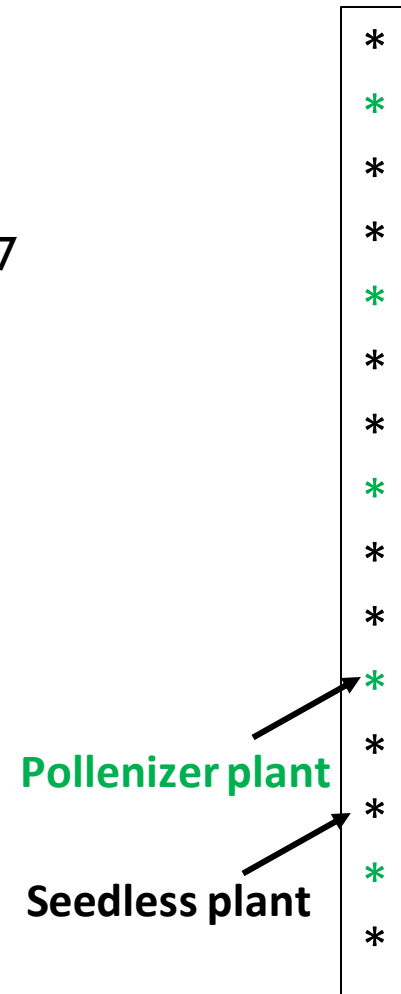


Standard-sized triploid watermelon

- The trial included 43 cultivars. Seven have yellow flesh, and eight have solid-green rind pattern.

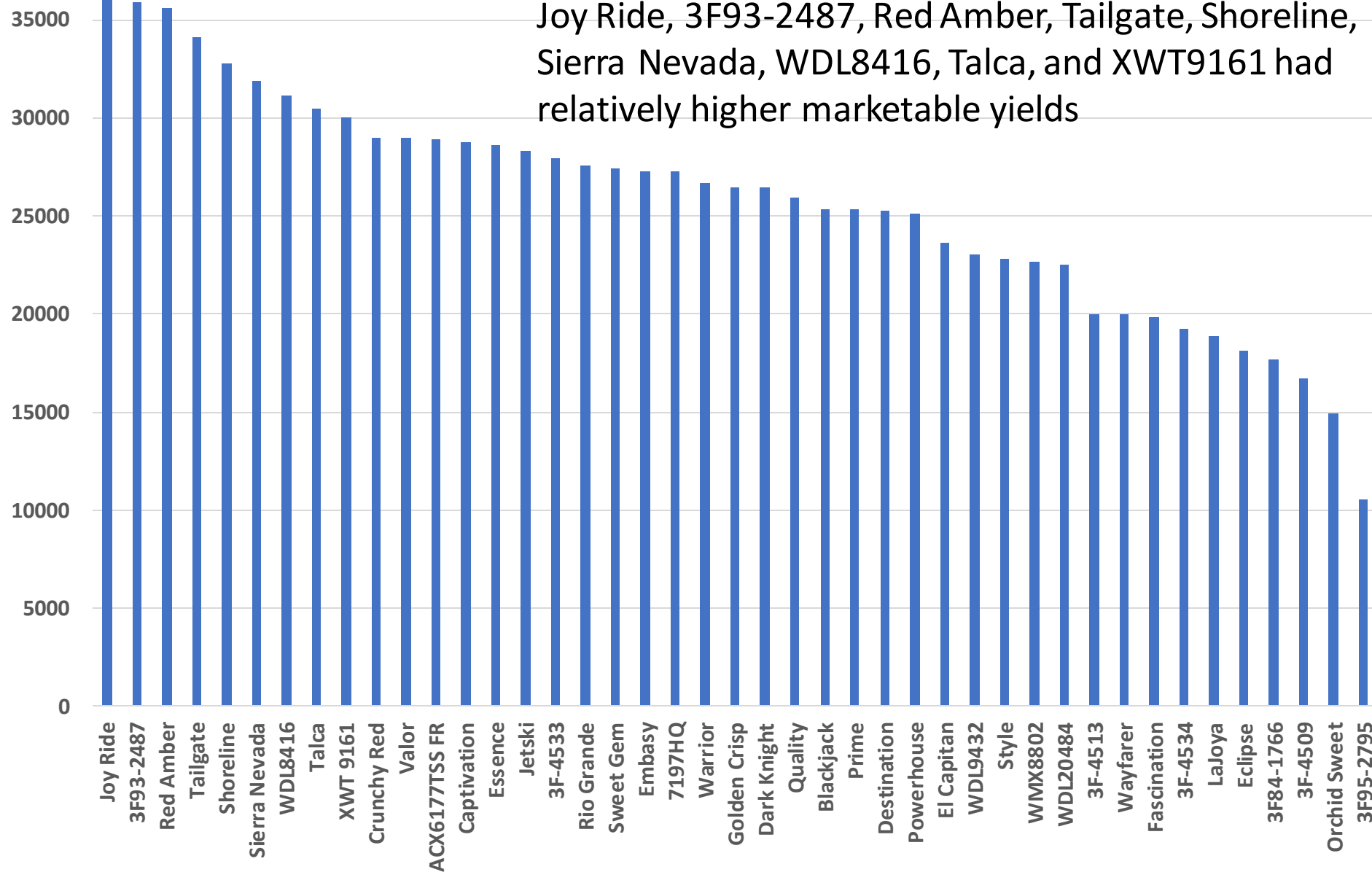
Cultivar	Seed Source	Flesh color	Rind pattern
Embassy	BASF	Red	Striped
ACX6177TSS FR	BASF	Red	Striped
Warrior	BASF	Red	Striped
7197HQ	BASF	Red	Striped
Style	BASF/SWPAC	Red	Solid dark green
Destination	Enza Zaden	Red	Striped
Rio Grande	Enza Zaden	Red	Striped
Red Amber	Enza Zaden	Red	Striped
Crunchy Red	Harris Moran	Red	Striped
WMX8802	Harris Moran	Red	Striped
Wayfarer	Harris Moran/SWPAC	Red	Solid green
Prime	Known you	Red	Striped
3F84-1766	Known you	Red	Striped
Quality	Known you	Red	Striped
3F95-2795	Known you	Yellow	Striped
3F-4509	Known you	Yellow	Striped
3F-4513	Known you	Yellow	Striped
3F93-2487	Known you	Red	Solid green
3F-4533	Known you	Yellow	Solid green
3F-4534	Known you	Yellow	Striped
Orchid Sweet	Known you	Yellow	Striped
Lajoya	Origenseeds	Red	Striped
Talca	Origenseeds	Red	Striped
Essence	Origenseeds	Red	Striped
Sierra Nevada	Sakata	Red	Striped
El Capitan	Sakata	Red	Striped
XWT 9161	Sakata	Red	Striped
Eclipse	Sakata/SWPAC	Red	Solid dark green
Blackjack	Seedway/SWPAC	Red	Solid dark green
Jetski (SVWA6576)	Seminis (Bayer)	Red	Striped
Tailgate	Seminis (Bayer)	Red	Striped
Joy Ride	Seminis (Bayer)	Red	Striped
Shoreline	Seminis (Bayer)	Red	Striped
Captivation	Syngenta	Red	Striped
Fascination	Syngenta	Red	Striped
Powerhouse (WDL7401)	Syngenta	Red	Striped
Valor	Syngenta	Red	Striped
Golden Crisp	Syngenta	Yellow	Striped
WDL8416	Syngenta	Red	Striped
WDL9432	Syngenta	Red	Striped
WDL20484	Syngenta	Red	Striped
Dark Knight	Syngenta/SWPAC	Red	Solid dark green
Sweet Gem	Syngenta/SWPAC	Red	Solid dark green

- Sandy-loam soil, 0.8% organic matter
- Fertilizers at a rate of 325 lb/acre urea (46-0-0), 100 lb/acre potash (0-0-60), 100 lb/acre K-Mag granular (0-0-22-11-22), 7 lb/acre boron 14.3%, and 10 lb/acre Zinc 10% LS. Broadcast applied preplant.
- Spacing: 4' in-row spacing, 8' between-row spacing
- Mixed pollenizer plants including SP-7 (Syngenta), Wild Card Plus (Sakata), 800 (BASF) and Ace (Sakata). 1:2 ratio
- Transplanted on May 17, 2022
- Randomized complete block design, 3 blocks
- Harvested four times on July 19, July 27, Aug. 3, Aug. 10



Marketable Yield (lbs/acre)

40000



Marketable Yield (lbs/acre) in 45-count Fruit Size Category

25000

Joy Ride, Essence, Destination, Tailgate, El Capitan, Red Amber, Embassy and Captivation had relatively higher yield in 45-count fruit

Top yielding cultivar 3F93-2487 had smaller fruit; Sierra Nevada had larger fruit

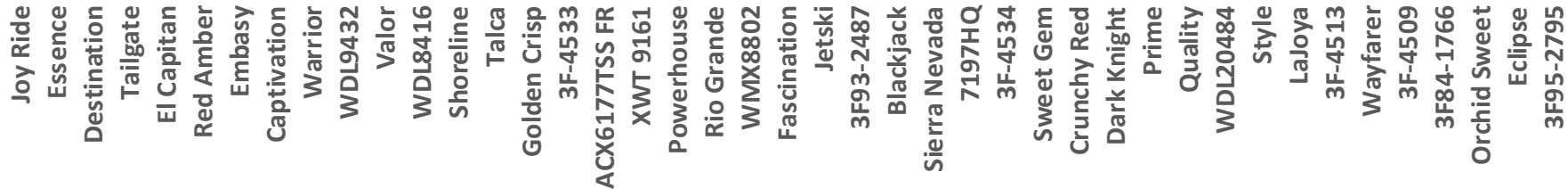
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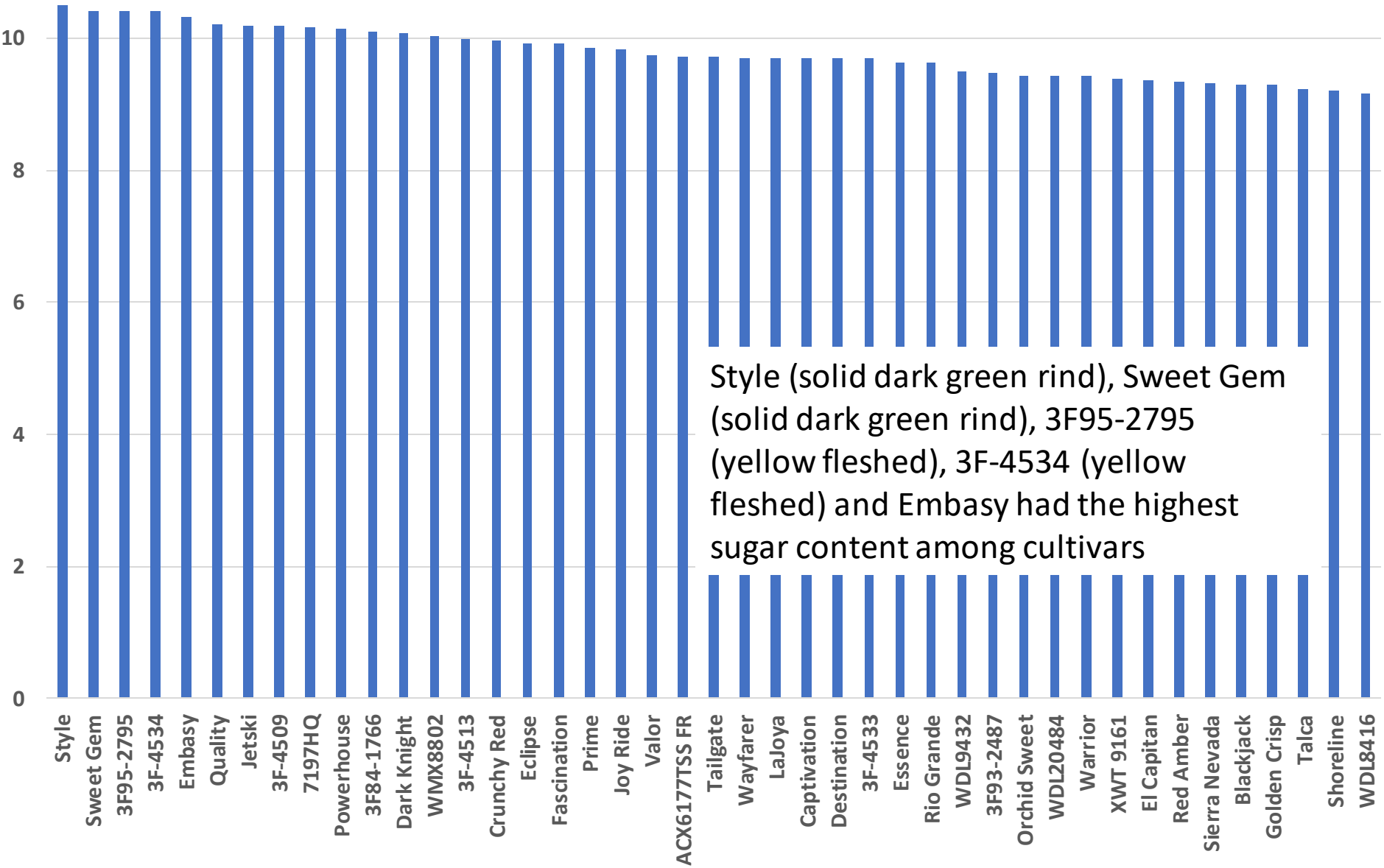
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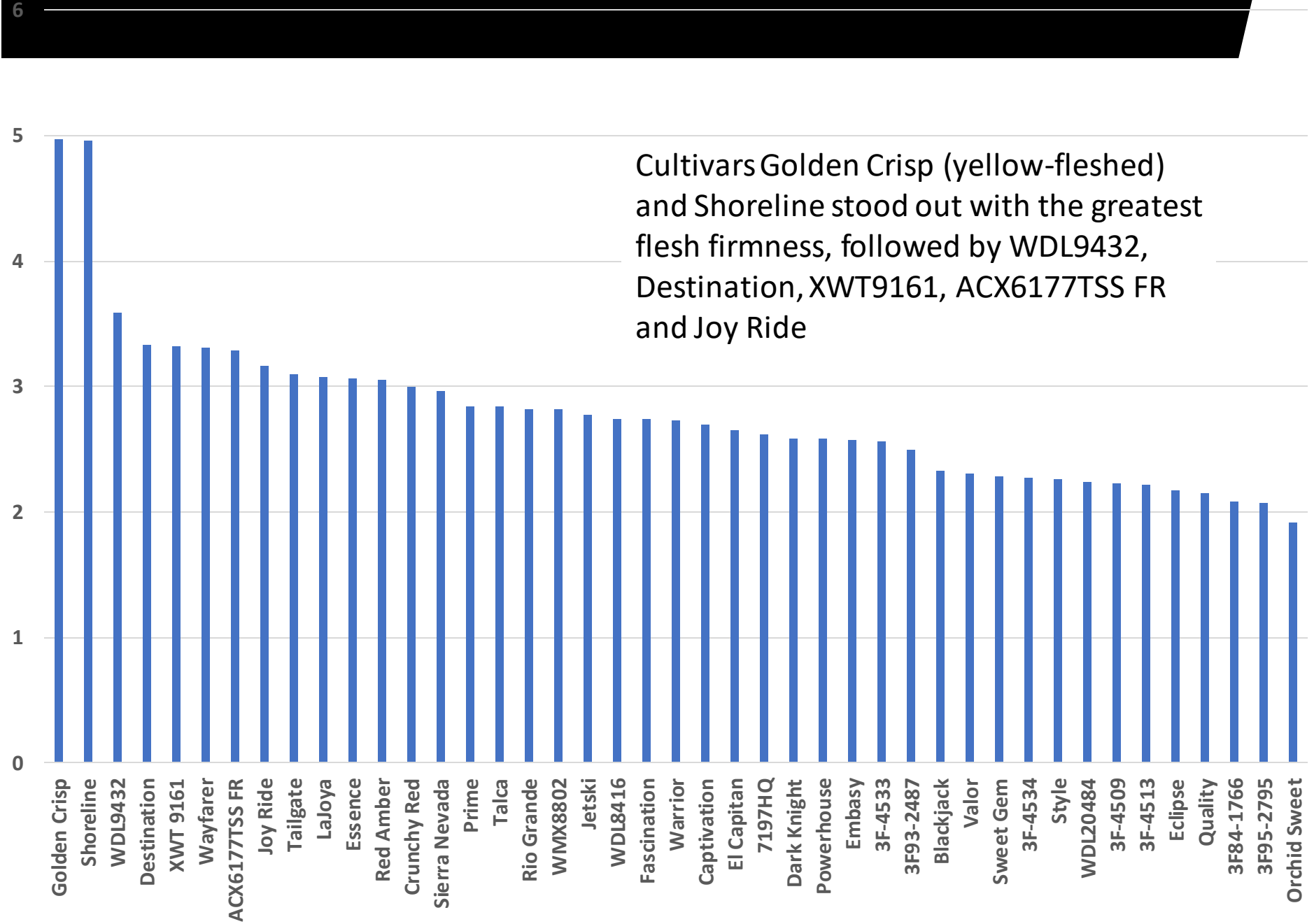


Sugar content (Brix)










12



Flesh Firmness (lbs-force)



Solid-green watermelon comparison

Blackjack			
Dark Knight			
Eclipse			
Style			

Sweet Gem			
Wayfarer			
3F93-2487			
3F-4533			

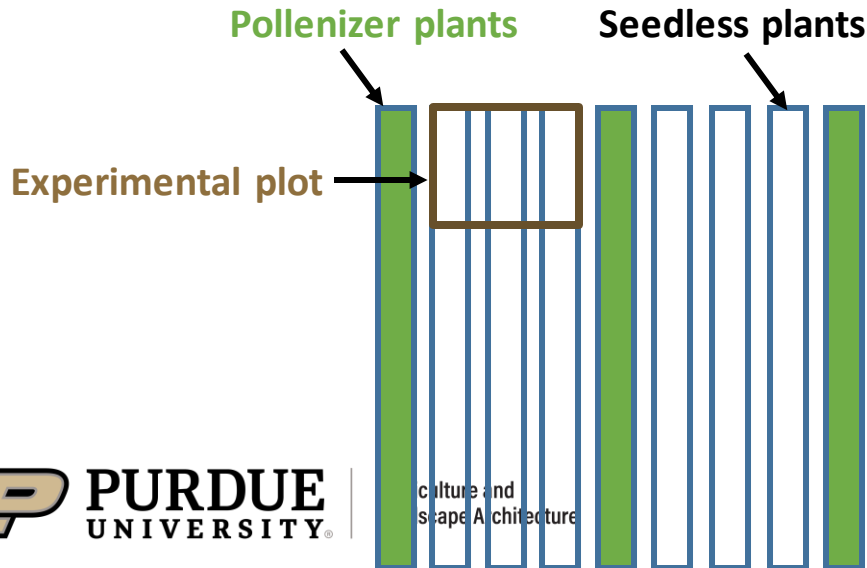
Cultivar	Marketable Yield		Total Yield	
	No/acre	lbs/acre	No/acre	lbs/acre
Blackjack	1679 b	25323 bcd	1860 b	28074 b
Dark Knight	1815 b	26475 bc	1860 b	27090 bc
Eclipse	1633 b	18124 d	1724 b	19047 d
Style	1906 b	22839 bcd	1951 b	23350 bcd
Sweet Gem	2042 ab	27458 b	2042 b	27458 b
Wayfarer	1769 b	19969 cd	1815 b	20280 cd
3F93-2487	2722 a ^z	35926 a	2722 a	35926 a
3F-4533	1996 b	27969 b	2087 ab	29267 ab

Cultivar	Average fruit weight	Length (cm)	Width (cm)	Rind thickness (cm)	Soluble solids content (Brix)	Firmness (lbs-force)
Blackjack	15.13 a	25.40 ab	22.56 bc	1.26 abc	9.31 e	2.33 b
Dark Knight	14.70 ab	24.06 cd	23.94 a	1.34 ab	10.07 abc	2.58 b
Eclipse	11.21 d	21.77 f	21.66 c	1.23 bc	9.93 bcd	2.17 b
Style	12.01 cd	22.90 def	21.88 c	1.30 abc	10.50 a	2.26 b
Sweet Gem	13.40 bc	23.11 de	22.69 bc	1.45 a	10.42 ab	2.29 b
Wayfarer	11.39 d	22.16 ef	21.64 c	1.26 abc	9.71 cde	3.31 a
3F93-2487	13.39 bc	25.94 a	22.42 bc	1.38 ab	9.47 de	2.50 b
3F-4533	14.10 ab	24.47 bc	22.97 ab	1.12 c	9.69 cde	2.56 b

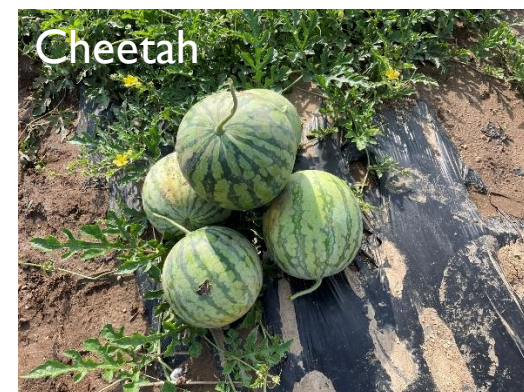
Personal-sized triploid watermelon

- The trial included 12 varieties
- Sandy-loam soil, 1.3% organic matter
- Fertilizers applied preplant
- Spacing: 2' in-row spacing, 6' between-row spacing
- Pollenizer 'SP7', 1:3 ratio
- Harvested on July 28, Aug. 3 and Aug 9
- Randomized complete block design, 3 blocks

Cultivar	Seed Source
Bolita	BASF
Nectaro	Hazera
Expert	Hazera
Cheetah	Hazera
50035	Hazera
50036	Hazera
Gentility	Known you
3F94-2730	Known you
Queenlet	Known you
ORS 7226-3	Origeneseeds
Petite Perfection	Syngenta/SWPAC
Ocelot	Hazera/SWPAC



Cultivar	Marketable yield		Total yield	
	No/acre	lbs/acre	No/acre	lbs/acre
Bolita	3327 bc	22702 b	4336 bc	28951 bc
Nectaro	2924 bcd	19255 bcd	3832 bc	25601 bcde
Expert	3075 bc	20703 bc	3882 bc	25485 bcde
Cheetah	3781 b	25949 b	4689 ab	31335 b
50035	3075 bc	17267 bcd	3428 bcd	19465 def
50036	3327 bc	22285 b	4134 bc	27170 bcd
Gentility	3100 bc	20011 bcd	3227 cd	20714 cdef
3F94-2730	3428 b	22345 b	4134 bc	26413 bcd
Queenlet	5394 a	39336 a	5899 a	42123 a
ORS 7226-3	1663 d	12226 cd	2420 d	16874 ef
Petite Perfection	1941 cd	10225 d	2470 d	14783 f
Ocelot	1966 cd	11630 cd	2420 d	14131 f



Acknowledgements

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HM CLAUSE

Known-You Seed America

Sakata

Clifton

Enza Zaden

BASF

Seminis

Syngenta

Hazera

Origeneseeds

US Agriseeds

PureLine Seed

Gowan Seed