

2021 Standard Size Triploid Watermelon Variety Evaluation in Indiana

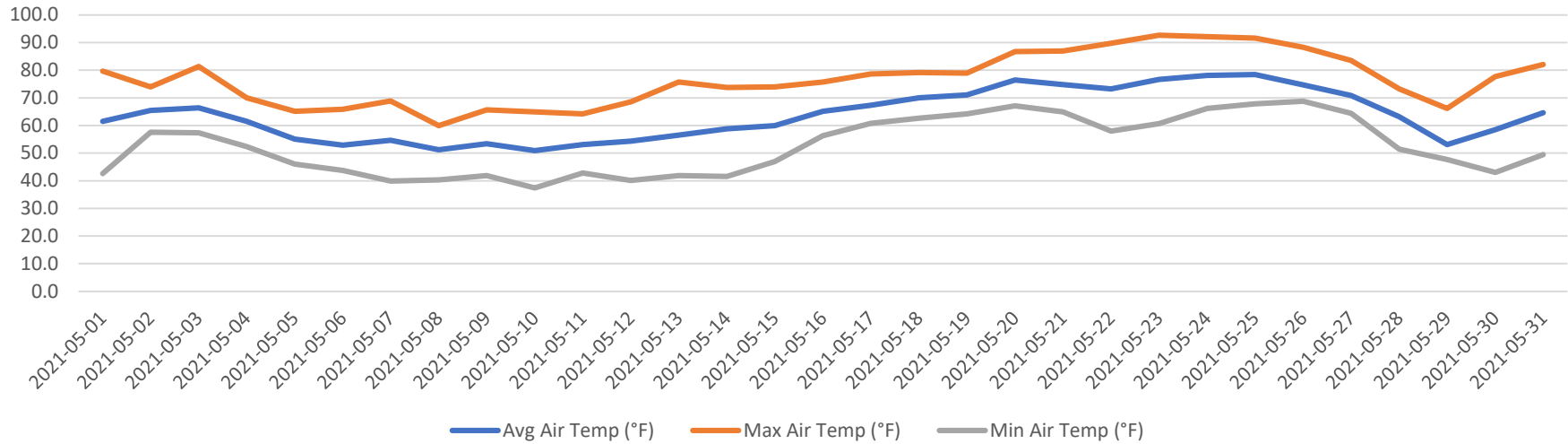
Wenjing Guan (guan40@purdue.edu)
Dan Egel (egel@purdue.edu)
Southwest Purdue Agricultural Center
Vincennes, IN 47591
812-886-0198



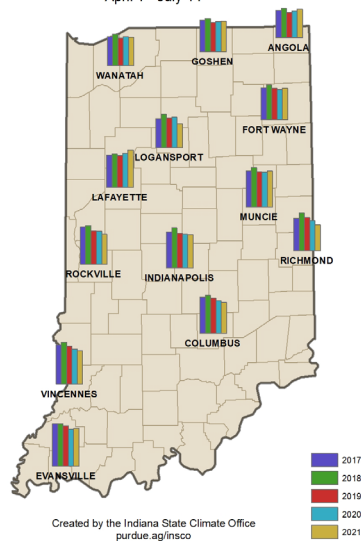
Horticulture and
Landscape Architecture



Air temperature (°F) in May 2021. Recorded at SWPAC

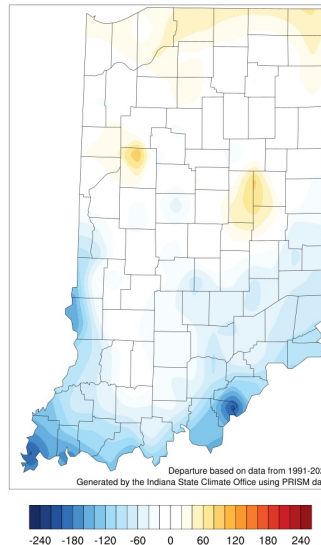


Accumulated Growing Degree Days (86/50) April 1 - July 14



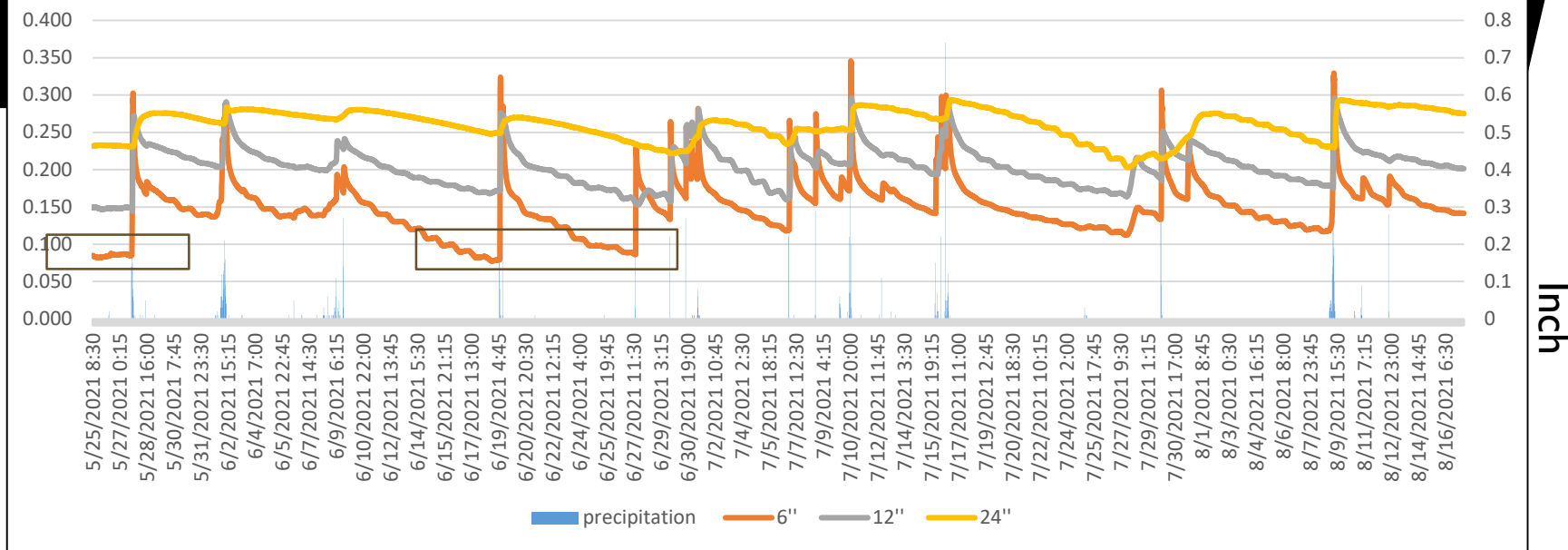
Growing Degree Day (50 F / 86 F) Departure From Average

April 1 - July 28, 2021

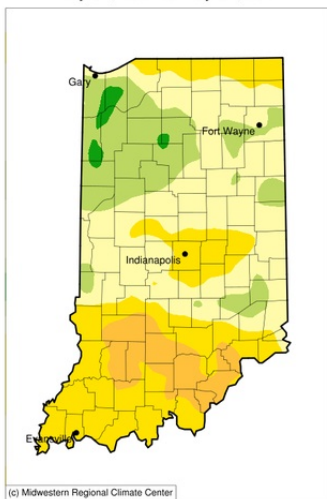


In general, 2021 season had lower temperatures, especially in May. Growing degree days lagged behind until end of July.

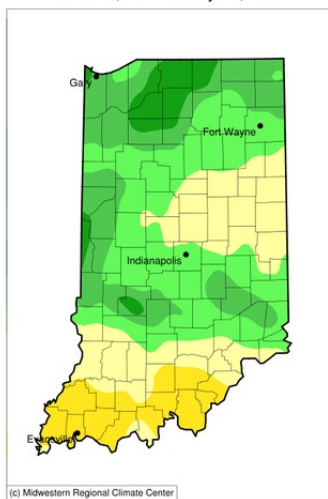
Soil moisture and precipitation from May 25 to Aug. 17, 2021



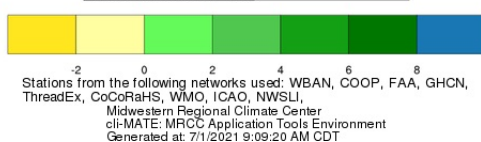
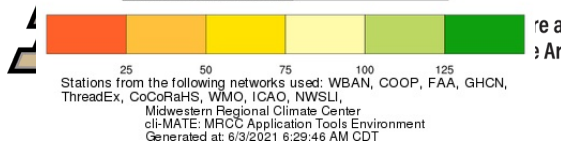
Accumulated Precipitation (in): Percent of 1991-2020 Normals
May 01, 2021 to May 31, 2021



Accumulated Precipitation (in): Departure from 1991-2020 Normals
June 16, 2021 to July 01, 2021



May, and the second half of June were abnormally dry in the past season



Standard-size triploid watermelon

- The trial included 35 watermelon varieties and two grafted entries.
- Sandy-loam soil, 1.1% organic matter
- Fertilizers applied preplant
- Spacing: 4' in-row spacing, 8' between-row spacing
- Pollenizer Wild Card (Sakata), 1:2 ratio
- Transplanted on May 17, 2021
- Harvested five times on July 21, July 27, Aug. 3, Aug. 10 and Aug 17
- Randomized complete block design, 3 blocks

Pollenizer plant

Seedless plant

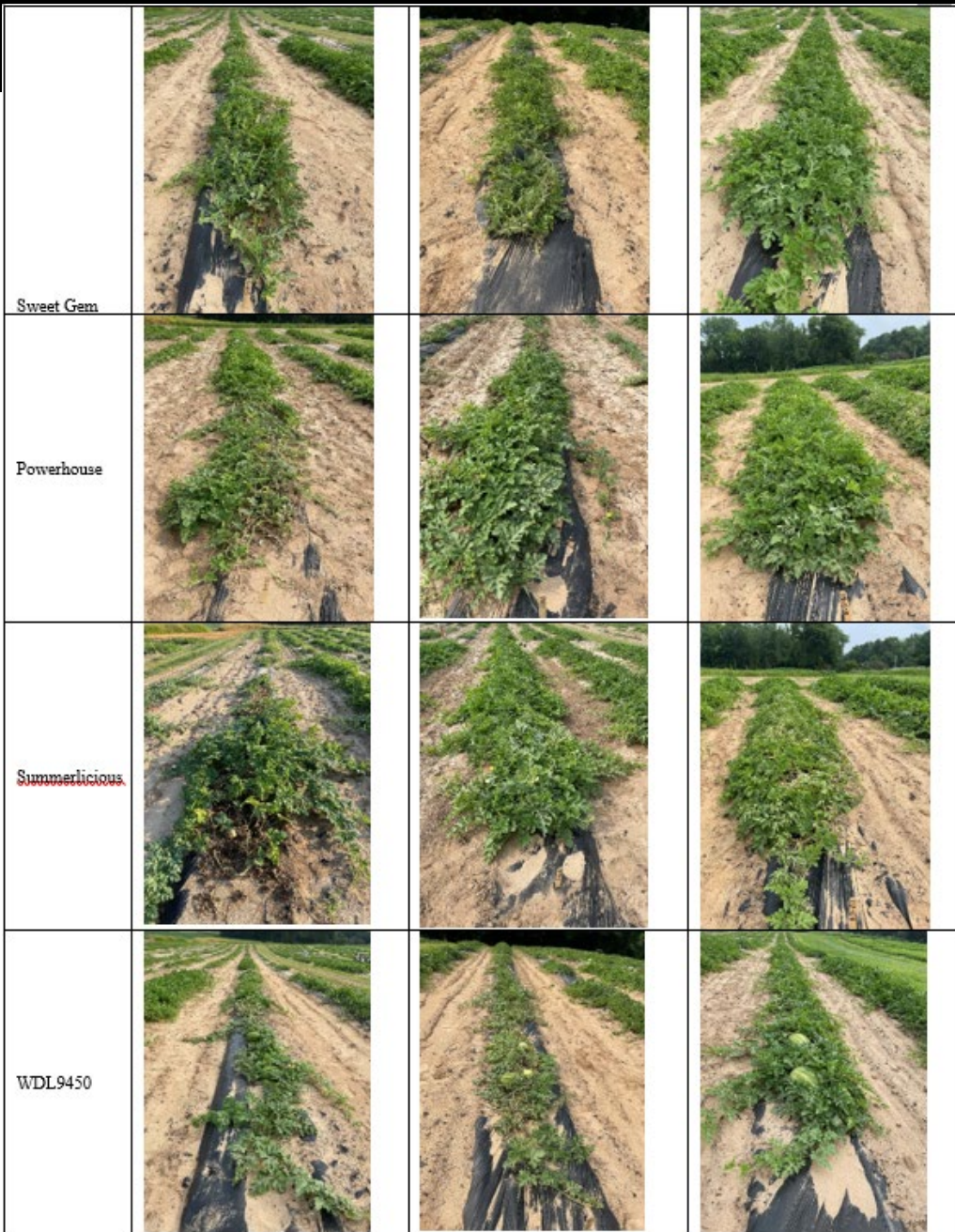


| Variety | Seed source |
|---|--------------|
| Tailgate | Seminis |
| Shoreline | Seminis |
| SVWA6576 | Seminis |
| Fascination | Syngenta |
| Excursion | Syngenta |
| Captivation | Syngenta |
| WDL8415 | Syngenta |
| Dark Knight | Syngenta |
| Sweet Gem | Syngenta |
| Powerhouse | Syngenta |
| Summerlicious | Syngenta |
| WDL9450 | Syngenta |
| WDL9454 | Syngenta |
| Scarlet Crisp | Syngenta |
| WDL8425 | Syngenta |
| Red Opal | Seedway |
| Blackjack | Seedway |
| Crackerjack | Seedway |
| Guardsmen | Seedway |
| SW#124 | Seedway |
| 6177 | BASF |
| 7197 | BASF |
| Style | BASF |
| Embassy | BASF |
| El Capitan | Sakata |
| Sierra Madre | Sakata |
| Sierra Nevada | Sakata |
| Red Amber | Enza Zaden |
| E26C.00139 | Enza Zaden |
| E26C.00124 | Enza Zaden |
| Red Garnet | Gowan Seed |
| Traveler | HM CLAUSE |
| Premont | Clifton |
| Arizonita | Clifton |
| 64-1836 F1 | PurelineSeed |
| Grafted Fascination (Squash rootstock) | |
| Grafted Fascination (Carolina Strongback rootstock, CS) | |

Rep A

Rep B

Rep C



Vine coverage in three blocks were presented in Figure 4 (Page 21-31)

Top yielding varieties in three replications. Table 2. Page 5

| Variety | Total yield* | | Marketable yield | |
|------------|--------------|----------|------------------|----------|
| | Lbs/acre | No./acre | Lbs/acre | No./acre |
| Traveler | 41451.9 | 3221.6 | 39062.4 | 2994.8 |
| SW#124 | 39767.6 | 2994.8 | 36217.4 | 2495.6 |
| Excursion | 38947.2 | 2586.4 | 38038.8 | 2495.6 |
| Red Opal | 35995.1 | 2767.9 | 34251.8 | 2631.8 |
| SVWA6576 | 35253.7 | 2314.1 | 35253.7 | 2314.1 |
| 7197 | 34962.3 | 2314.1 | 34962.3 | 2314.1 |
| WDL8425 | 34146.5 | 2541.0 | 32699.0 | 2404.9 |
| Red Amber | 33859.7 | 2223.4 | 33859.7 | 2223.4 |
| WDL8415 | 33350.6 | 2359.5 | 32113.7 | 2268.8 |
| Red Garnet | 32332.4 | 2586.4 | 29608.1 | 2314.1 |

Top yielding varieties in Rep C. Table 3. Page 6

| Variety | Total yield | | Marketable yield | |
|--------------|-------------|----------|------------------|----------|
| | Lbs/acre | No./acre | Lbs/acre | No./acre |
| SW#124 | 56810.4 | 3811.5 | 55247.7 | 3675.4 |
| E26C.00124 | 55100.7 | 3811.5 | 55100.7 | 3811.5 |
| Captivation | 53573.4 | 3539.3 | 53573.4 | 3539.3 |
| SVWA6576 | 52674.9 | 3403.1 | 52674.9 | 3403.1 |
| Sierra Madre | 51523.3 | 2994.8 | 51523.3 | 2994.8 |
| Traveler | 49633.9 | 3811.5 | 44673.5 | 3403.1 |
| Arizonita | 47469.5 | 3267.0 | 47469.5 | 3267.0 |
| Red Opal | 45362.3 | 3675.4 | 45362.3 | 3675.4 |
| Fascination | 45242.5 | 2994.8 | 45242.5 | 2994.8 |
| 7197 | 44276.0 | 2994.8 | 44276.0 | 2994.8 |

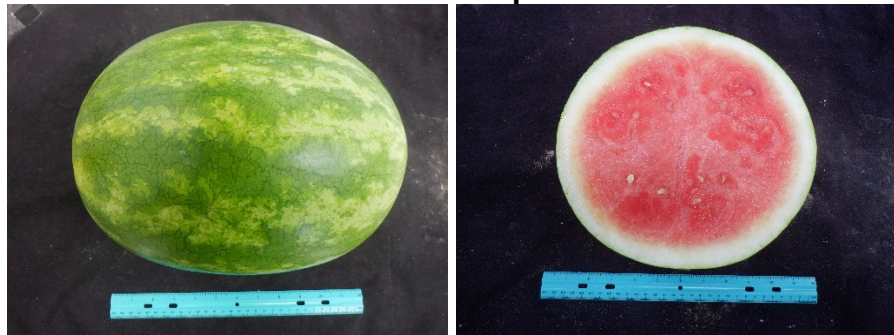
SW#124



SVWA6576



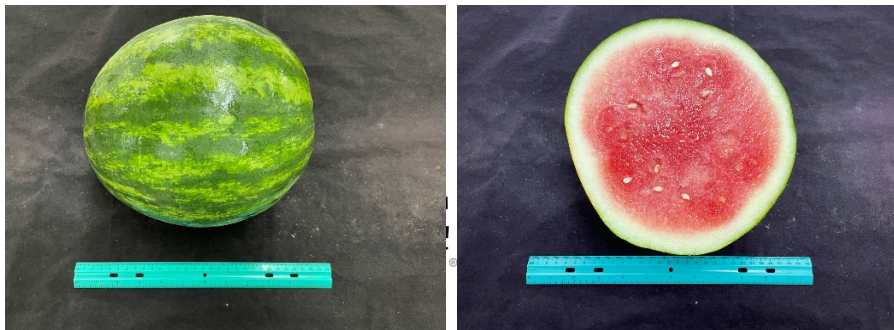
Red Opal



7197



Traveler



Personal-size 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 Aug. 10, 16 and 23
- Randomized complete block design, 3 blocks

| Variety | Seed source |
|-------------------|--------------|
| Ladybelle | BASF |
| Nun 31814 WMW | BASF |
| Preakness | Sakata |
| Cheetah | Hazera |
| Nectaro | Hazera |
| Excite | Hazera |
| 50035 | Hazera |
| Sirius | Syngenta |
| Petite Perfection | Syngenta |
| 65-1833 FI | Purelineseed |
| Sugar Bumb | US Agriseeds |
| Sugar Rush | US Agriseeds |

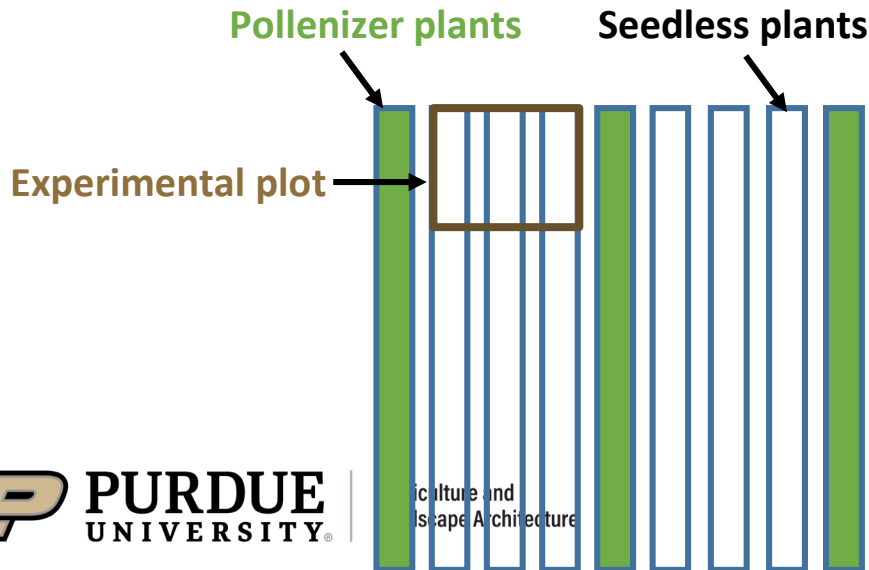


Table 2. Total and marketable yield

| Variety | Marketable yield | | Total yield | |
|-------------------|------------------|-------------|-------------|-------------|
| | Lbs/acre | No./acre | Lbs/acre | No./acre |
| Sugar Rush | 106,908 a | 18,805 b | 107,305 a | 18,906 b |
| Excite | 99,372 ab | 16,184 bcde | 100,130 ab | 16,335 bcde |
| Preakness | 95,737 abc | 16,738 bcd | 96,467 abc | 16,889 bcd |
| 50035 | 94,973 abc | 18,150 bc | 95,195 abc | 18,200 bc |
| Nectaro | 92,605 abc | 15,932 bcde | 92,605 abc | 15,931 bcde |
| Sugar Bumb | 92,358 abc | 22,990 a | 92,443 abc | 23,040 a |
| Petite Perfection | 87,395 abc | 17,192 bcd | 88,551 abc | 17,444 bcd |
| Nun 31814 WMW | 85,154 bc | 12,957 ef | 87,000 bc | 13,209 ef |
| Sirius | 85,136 bc | 14,419 def | 85,856 bc | 14,570 cdef |
| Cheetah | 81,379 bc | 13,764 def | 82,136 bc | 13,915 def |
| 65-1833 F1 | 79,958 bc | 11,142 f | 80,514 bc | 11,293 f |
| Ladybelle | 78,606 c | 14,520 cdef | 79,171 c | 14,620 cdef |





Cantaloupe

- Sandy-loam soil, 1.3% organic matter
- Fertilizers applied preplant
- Spacing: 2.5' in-row spacing, 6' between-row spacing
- Seedlings were transplanted on May 14
- Harvest July 14 to July 30, every 2-3 days
- Randomized complete block design, 3 blocks

| Variety | Seed Source |
|------------------|----------------|
| Aphrodite | SWPAC |
| Athena | SWPAC |
| Heidi (MS7350) | Syngenta |
| Damaris (ME8892) | Syngenta |
| Astound | Syngenta |
| Accolade | Syngenta |
| HMC458995 | HM Clause |
| HMC458996 | HM Clause |
| Sun Pac | HM Clause |
| Emperador F I | PureLine seeds |
| VMI8011260 | US Agriseeds |

Cantaloupe

Yield and average fruit weight

| Variety | Marketable yield | | Total Yield | | Average fruit weight (lb) |
|---------------------|-----------------------|--------------------|-----------------------|--------------------|---------------------------|
| | Weight (lbs) per acre | Fruit no. per acre | Weight (lbs) per acre | Fruit no. per acre | |
| Astound | 57,493 a | 9,099 a | 58,186 a | 9,293 a | 6.34 cd |
| Aphrodite | 51,422 ab | 6,582 bcd | 54,851 ab | 7,066 bc | 7.84 a |
| Damaris (ME8892) | 49,879 ab | 7,647 ab | 55,065 ab | 8,712 ab | 6.48 bcd |
| Accolade | 47,006 abc | 7,647 ab | 47,728 abc | 7,744 abc | 6.16 cd |
| Athena | 43,249 bc | 6,969 bc | 45,290 bc | 7,454 abc | 6.20 cd |
| VM18011260 | 39,965 bc | 7,066 bc | 47,097 abc | 8,712 ab | 5.72 de |
| HMC458996 | 37,882 cd | 5,517 cde | 39,390 c | 5,905 cd | 6.86 bc |
| HMC458995 | 35,824 cde | 5,614 cde | 39,098 c | 6,292 cd | 6.40 cd |
| Sun Pac | 26,736 def | 4,549 ef | 26,736 d | 4,550 de | 5.89 de |
| Emperador F1 | 24,781 ef | 4,743 def | 24,781 d | 4,743 de | 5.24 e |
| Heidi (MS7350) | 23,079 f | 3,291 f | 25,950 d | 3,978 e | 7.24 ab |



Astound



Heidi
(MS7350)



Aphrodite



HMC458996



Damaris (ME8892)



HMC458995



Accolade



Sun Pac



Athena



Emperador F1



VM18011260

Acknowledgements

Southwest Purdue
Agricultural Center
Dennis Nowaskie
Dean Haseman
Barbara Joyner
Angie Thompson
Bill Davis

Seed Companies

Seedway
HM CLAUSE
Know-You Seed America
Sakata
Clifton
PureLine Seed
Enza Zaden
Gowan Seed
BASF
Seminis
Syngenta
Hazera
US Agriseeds