**Pumpkin Cultivar Performance Trial**

**Grown in Southern Ohio 2017**

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**OBJECTIVES:**

To screen new pumpkin variety releases (2016-2017) for their production performance under Southern Ohio growing conditions and to evaluate yield potential and fruit quality characteristics for the southern Ohio area.

**MATERIALS and METHODS:**

This trial evaluated thirty replicated and six observation pumpkin cultivars for their production suitability, performance and quality attributes under southern Ohio growing conditions. Cultivar selections were new releases along with industry standard varieties. Input was received from seed companies, growers, and industry personnel regarding variety selection and standard comparison. Seeds were direct seeded to the field on June 7th. Randomized complete block design with three blocks and 5 plants per variety per plot was used in the study. Rows were spaced 8 foot apart with seeds planted 3 foot apart in the row and row length was 15 foot. This study was conducted at the Ohio State University (OSU) South Centers/Piketon Research & Extension Center at Piketon, Ohio (lat. 39.07° N, long. 83.01° W), elevation 578 feet. The experimental soil is designated as a DoA—Doles silt loam, with 0–3% slopes. It is a deep, nearly level and somewhat poorly drained soil. Typically, the soil surface is a brown, friable silt loam about 20 cm deep and beneath this the subsoil is about 18.5 m. 578 pounds of 19-19-19 fertilizer per acre was applied prior to planting. There were zero applications of powdery mildew fungicides applied. Insecticides and downy mildew applications were applied following recommendations from the Midwest Vegetable Production Guide for Commercial Growers (ID-56). Sandea and Strategy pre-emerge herbicides were applied to the trial. Weeds were also controlled with cultivation and hand hoeing.

**RESULTS and DISCUSSION:**

All plants were harvested on September 21. Fruit were weighed individually. At harvest three fruit from each variety were collected for the Chroma evaluation of rind color to describe the vividness or dullness of pumpkin color. Overall plant and fruit quality was good in the 2017 growing season. Overall fruit yield was good for this trial. Marketable pounds per acre ranged from a high of 63,434 (Orange Sunrise) to a low of 14,274 (Jack Sprat) pounds per acre. Average fruit weight ranged from a high of 32.88 pounds (RPX6903) to a low of 2.54 pounds (Jack Sprat).

**References**

Egel, D., R. Foster, E. Maynard, R., et al. 2017. Midwest Vegetable Production Guide for Commercial Growers, 2017 (ID-56). Purdue University.

Table 1. Yields from replicated Pumpkin Cultivar Performance Trial.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variety | Pounds per Acre | Pounds per Plant | Fruit per Acre | Average Fruit Weight (lbs.) | Seed Source |
| RPX6883 | 54273 | 49.838 | 5808 | 22.849 | Rupp |
| ACX7606 | 46465 | 42.667 | 13794 | 10.917 | Abbot & Cobb |
| Kratos | 40342 | 37.045 | 10164 | 21.513 | Harris Moran |
| Rhea | 40305 | 37.011 | 11979 | 16.996 | Harris Moran |
| JPN 6200R | 39267 | 36.058 | 9801 | 20.588 | Johnnys |
| 1512 | 38112 | 34.997 | 13431 | 13.36 | Abbot & Cobb |
| EX #5 | 33949 | 31.174 | 7623 | 15.73 | Enza Zaden |
| Diablo | 33484 | 30.748 | 7986 | 16.71 | Sakata |
| SPU6016 | 32300 | 29.66 | 11979 | 14.006 | Sakata |
| JPN-14-4090 | 32131 | 29.505 | 12705 | 13.07 | Johnnys |
| Hulk | 31242 | 28.689 | 7260 | 23.869 | Sakata |
| EX #3 | 30633 | 28.129 | 10890 | 12.854 | Enza Zaden |
| Skidoo Gold | 30390 | 27.906 | 9438 | 13.625 | Rupp |
| Bayhorse Gold | 30378 | 27.895 | 8712 | 16.79 | Rupp |
| Blaze | 29065 | 26.689 | 32307 | 3.378 | Sakata |
| Renegade | 28704 | 26.358 | 11253 | 12.785 | Johnnys |
| RPX6208 | 28365 | 26.047 | 7986 | 16.741 | Rupp |
| Solid Gold | 28329 | 26.014 | 7623 | 16.43 | Rupp |
| Eagle City Gold | 27133 | 24.915 | 7986 | 13.698 | Rupp |
| PX6229 | 25232 | 23.17 | 12342 | 11.329 | Rupp |
| Jason | 23272 | 21.37 | 8712 | 14.259 | Sakata |
| Cracker Jack | 23208 | 21.311 | 11979 | 11.304 | Sakata |
| RPX6927 | 22383 | 20.554 | 14883 | 7.609 | Rupp |
| Bellatrix | 21945 | 20.151 | 7986 | 14.432 | Enza Zaden |
| JPN 62009 | 20865 | 19.159 | 12705 | 9.813 | Johnnys |
| RPX6880 | 18932 | 17.385 | 9438 | 6.628 | Rupp |
| Zeus | 17402 | 15.979 | 6171 | 13.565 | Harris Moran |
| Cronus | 17332 | 15.915 | 2904 | 21.747 | Harris Moran |
| 1543 | 15934 | 14.632 | 10527 | 4.986 | Abbott & Cobb |
| Jack Sprat | 14274 | 13.107 | 22869 | 2.543 | Sakata |
| **LSD** | **16512** | **15.163** | **9070** | **5.9875** | **NA** |

Table 2. Chroma Meter rind color results from 3 fruit sampled.

|  |  |  |  |
| --- | --- | --- | --- |
| Variety | L  (defines lightness) | A  (denotes the red/green value) | B  (defines the yellow/blue value) |
| Cronus | 51.9 | 26.64 | 28.19 |
| 1512 | 45.29 | 27.04 | 24.65 |
| 1543 | 50.88 | 30.3 | 28.16 |
| ACX7606 | 48.17 | 28.49 | 27.42 |
| Bellatrix | 52.93 | 29.94 | 29.72 |
| EX #3 | 58.18 | 29.8 | 34.58 |
| EX #5 | 49.42 | 28.73 | 27.44 |
| Kratos | 46.69 | 27.89 | 24.32 |
| Rhea | 53.77 | 30.34 | 28.93 |
| Zeus | 52.17 | 31 | 29.91 |
| JPN 62005R | 49.35 | 29.18 | 27.55 |
| JPN 62009 | 48.84 | 28.34 | 26.63 |
| JPN-14-4090 | 54.15 | 30.71 | 30.28 |
| Renegade | 52.23 | 32.6 | 29.08 |
| Bayhorse Gold | 43.13 | 23.47 | 22.76 |
| Eagle City Gold | 52.12 | 33.27 | 28.81 |
| PX6229 | 60.52 | 16.26 | 27.74 |
| RPX6208 | 50.84 | 30.17 | 29.78 |
| RPX6880 | 45.79 | 30.05 | 23.89 |
| RPX6883 | 39.98 | 21.9 | 21.76 |
| RPX6927 | 85.2 | 1.43 | 23.45 |
| Skidoo Gold | 47.98 | 25.96 | 25.5 |
| Solid Gold | 52.78 | 23.3 | 26.17 |
| Cracker Jack | 49.66 | 30.91 | 26.54 |
| Diablo | 48.63 | 28.77 | 27.05 |
| Hulk | 44.9 | 27.65 | 25.97 |
| Jack Sprat | 57.63 | 33.71 | 34.2 |
| SPU6016 | 43.61 | 27.65 | 24.69 |
| Blaze | 71.31 | 21.7 | 41.97 |
| Jason | 53.69 | 30.61 | 30.37 |
| RPX6890 | 50.78 | 15.78 | 30.07 |
| RPX6903 | 36.74 | 20.82 | 21.16 |
| RPX6879 | 52.07 | 29.83 | 28.9 |
| RPX6851 | 54.78 | 31.49 | 31.52 |
| Tallon | 45.91 | 24.21 | 24.87 |
| Orange Sunrise | 56.28 | 35.99 | 32.8 |

Table 3. Yields Observation Pumpkin Cultivar Performance Trial.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variety | Pounds per Acre | Pounds per Plant | Fruit per Acre | Average Fruit Weight (lbs.) | Seed Source |
| Orange Sunrise | 63434.25 | 58.25 | 14157 | 17.92 | Rupp |
| RPX6903 | 59677.2 | 54.8 | 5445 | 32.88 | Rupp |
| Tallon | 34457.77 | 31.64 | 8712 | 23.73 | Rupp |
| RPX6879 | 29522.79 | 27.11 | 6534 | 22.59 | Rupp |
| RPX6851 | 26771.97 | 24.58 | 4356 | 30.73 | Rispen Seed |
| RPX6890 | 18841.51 | 17.3 | 9801 | 11.53 | Rispen Seed |

Figure 1. Exterior of top five varieties in the 2017 Pumpkin Cultivar Performance Trial.

Figure 2. Exterior of specialty varieties in the 2017 Pumpkin Cultivar Performance Trial.



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