Pumpkin Variety Trial 2005

Meigs Horticultural Facility
Throckmorton Purdue Ag Center
Lafayette, Indiana

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• Planted May 25, Harvested Sept. 1
• 908 plants per acre
• Drip irrigation
• Standard pest management
# Large Pumpkins: Average over 20 lb.

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Seed Source</th>
<th>Ave. Wt. (lb.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvest Time</td>
<td>AC</td>
<td>25</td>
</tr>
<tr>
<td>Spartan (pmr)</td>
<td>SW</td>
<td>24</td>
</tr>
<tr>
<td>RPX 768</td>
<td>RU</td>
<td>24</td>
</tr>
<tr>
<td>Phat Jack</td>
<td>SI</td>
<td>23</td>
</tr>
<tr>
<td>Dependable</td>
<td>AC</td>
<td>23</td>
</tr>
<tr>
<td>771 Gold Medallion</td>
<td>RU</td>
<td>22</td>
</tr>
<tr>
<td>Howden Biggie</td>
<td>RI</td>
<td>22</td>
</tr>
<tr>
<td>Gold Medal</td>
<td>RU</td>
<td>22</td>
</tr>
<tr>
<td>Super Herc (int pmr)</td>
<td>HM</td>
<td>21</td>
</tr>
</tbody>
</table>

*In this trial*
Pumpkin Yield
Ave. Size over 20 lb.

Lafayette, IN, 2005

Tons per Acre

Dependable  RPX 768  Harvest Time  Howden Biggie  Gold Medal  771 Gold Medallion  Super Herc  Phat Jack  Spartan

Cultivar

LSD
Pumpkin Maturity
Ave. Size over 20 lb.

Percent of Fruit Orange by Sept. 1

RPX 768 Dependable Howden Biggie Gold Medal Harvest Time 771 Gold Medallion Spartan Super Herc Phat Jack

LSD
Dependable

Harvest Time
Gold Medal

RPX 768
Gold Medallion RPX 771

RPX 768

Gold Medal
# Medium Pumpkins: 12 to 18 lb.

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Seed Source</th>
<th>Ave. Wt.(lb.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPX 764 (pmt)</td>
<td>RU</td>
<td>18</td>
</tr>
<tr>
<td>Aladdin (pmt)</td>
<td>HM</td>
<td>17</td>
</tr>
<tr>
<td>Gold Gem</td>
<td>RU</td>
<td>16</td>
</tr>
<tr>
<td>18 Karat Gold (761) (pmt)</td>
<td>RU</td>
<td>15</td>
</tr>
<tr>
<td>RPX 763 (pmt)</td>
<td>RU</td>
<td>14</td>
</tr>
<tr>
<td>RPX 760 (pmt)</td>
<td>RU</td>
<td>14</td>
</tr>
<tr>
<td>Gladiator (pmt)</td>
<td>HM</td>
<td>13</td>
</tr>
<tr>
<td>Magic Lantern (pmt)</td>
<td>HM</td>
<td>12</td>
</tr>
</tbody>
</table>

*In this trial*
Pumpkin Yield
Ave. Size 12 - 18 lb.

Lafayette, IN, 2005

Tons per Acre

RPX 764
761 18 Karat Gold
Magic Lantern
RPX 760
Gold Gem
Aladdin
RPX 763

Cultivar

LSD
Pumpkin Maturity
Ave. Size 12 - 18 lb.

Percent of Fruit
Orange by Sept. 1

RPX 764
761 18 Karat Gold
Aladdin
Magic Lantern
Gold Gem
RPX 763
RPX 760

Cultivar

LSD
Note: Gladiator was planted later than other varieties and many seeds were eaten so the stand was very low.
# Pie Pumpkins

<table>
<thead>
<tr>
<th>Cultivar</th>
<th>Source</th>
<th>Ave. Wt. (lb.)</th>
<th>% Orange</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hybrid Pam</td>
<td>SW</td>
<td>4.5</td>
<td>87</td>
</tr>
<tr>
<td>Iron Man (pmt)</td>
<td>HM</td>
<td>3.1</td>
<td>80</td>
</tr>
<tr>
<td>Prankster (089) (pmt)</td>
<td>RU</td>
<td>3.1</td>
<td>85</td>
</tr>
</tbody>
</table>
Iron Man

Prankster (089)

Hybrid Pam
Pumpkin Yield
Ave. Size 3 - 5 lb.

Lafayette, IN, 2005

Tons per Acre

Hybrid Pam
089 Prankster
Iron Man

Cultivar

LSD
Pumpkin Research Update
Irrigation
Transplant vs Seed
Double-crop after Wheat

Pinney-Purdue Ag Center
Wanatah, Ind.

Jan. 24, 2006
Indiana Horticultural Congress
Drip Irrigation for Pumpkins

• Trials in 2004 and 2005
• Three treatments
  – NONE: no irrigation
  – MED: irrigate at 60 kPa tensiometer reading, 12 inch deep
  – HIGH: irrigate at 20 kPa tensiometer reading, 12 inch deep
• One drip tape per row
  – 40 gph/100 ft.
  – 8” emitter spacing
2004 vs 2005

Two harvests in 2004 because both transplanting and direct-seeding were used. Data shown includes both harvests.

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant</td>
<td>June 4</td>
<td>June 17</td>
</tr>
<tr>
<td>Harv. 1</td>
<td>Sept. 17</td>
<td>Sept. 20</td>
</tr>
<tr>
<td>Harv. 2</td>
<td>Oct. 7</td>
<td>–</td>
</tr>
<tr>
<td>Rainfall (in.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ave. Temp</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Pumpkin Irrigation 2004
View of plots early in season
Magic Lantern, 2004 (direct-seeded=sd)

Yield from first harvest

high
med.
none
Magic Lantern 2005 (sd)

- high
- med.
- none
Magic Lantern 2005 (sd)
Irrigation Effect on Yield
Magic Lantern, direct-seeded, Wanatah, IN 2004, 2005
Orange Pumpkin Yield (tons/A)

No significant differences

<table>
<thead>
<tr>
<th>Irrigation</th>
<th>Yield (tons/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>12.7</td>
</tr>
<tr>
<td>Med</td>
<td>13.3</td>
</tr>
<tr>
<td>High</td>
<td>15</td>
</tr>
</tbody>
</table>

None Med High

Irrigation
Irrigation Effect on Pumpkin Size
Magic Lantern, direct-seeded, Wanatah, IN 2004, 2005
Orange Pumpkin Average Wt. (lb.)

<table>
<thead>
<tr>
<th>Irrigation</th>
<th>Orange Pumpkin Average Wt. (lb.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>14.8</td>
</tr>
<tr>
<td>Med</td>
<td>15.8</td>
</tr>
<tr>
<td>High</td>
<td>17.5</td>
</tr>
</tbody>
</table>

None, Med, and High irrigation levels are indicated by 'b', 'b', and 'a' respectively.
Pumpkin Transplants 2004
Irrigation Effect on Yield
Magic Lantern and Gold Medal direct-seeded and transplanted Wanatah, IN 2004

Orange Pumpkin Yield (tons/A)

<table>
<thead>
<tr>
<th>Irrigation Level</th>
<th>Yield (tons/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>16.6</td>
</tr>
<tr>
<td>Med</td>
<td>17.4</td>
</tr>
<tr>
<td>High</td>
<td>18.8</td>
</tr>
</tbody>
</table>

The diagram shows the effect of different levels of irrigation on the yield of orange pumpkins. The yields are as follows:
- None: 16.6 tons/A
- Med: 17.4 tons/A
- High: 18.8 tons/A

The data indicates a significant increase in yield with increased irrigation levels.
Irrigation Effect on Pumpkin Size

Magic Lantern and Gold Medal, direct-seeded and transplanted Wanatah, IN 2004

Orange Pumpkin Average Wt. (lb.)

<table>
<thead>
<tr>
<th></th>
<th>Gold Medal</th>
<th>Magic Lantern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigation</td>
<td>None</td>
<td>Med High</td>
</tr>
<tr>
<td>Average Wt. (lb.)</td>
<td>27.8</td>
<td>14.7</td>
</tr>
<tr>
<td></td>
<td>28.1</td>
<td>15.8</td>
</tr>
<tr>
<td></td>
<td>27.2</td>
<td>17.1</td>
</tr>
</tbody>
</table>

Irrigation:
- None
- Med
- High
Seed vs Transplant 2004 (high irrigation)

Gold Medal - Seed

Magic Lantern - Seed

Gold Medal - Trans.

Magic Lantern - Trans.
Transplant vs Direct Seed: Effect on Yield

Magic Lantern and Gold Medal, 3 irrigation treatments, Wanatah, IN 2004

Orange Pumpkin Yield (tons/A)

Gold Medal

- Seed: 16.2
- Transplant: 20.4

Magic Lantern

- Seed: 13.1
- Transplant: 20.7
Transplant vs Direct Seed: Effect on Average Pumpkin Wt.
Magic Lantern and Gold Medal, 3 irrigation treatments, Wanatah, IN 2004

Orange Pumpkin Average Wt. (lb.)

Gold Medal
- Seed: 28.1
- Transplant: 27.4

Magic Lantern
- Seed: 15.4
- Transplant: 16.3

Legend:
- Seed
- Transplant
Pumpkins after Wheat

• Trials in 2004 and 2005
• 8 cultivars in 2004, 5 in 2005
• Two no-till planting methods
  – Direct seed by hand or jab planter
  – Transplant using mechanical no-till planter
  – Rows 6 ft. apart, plants 4 ft. apart in the row
• Plant dates: ‘04: July 13, ‘05: July 19
• Harvest dates: ‘04: Oct. 28.,’05: Oct. 21
• Weed Control:
  – Burn down before planting, Curbit (2004), hand-weeding
• Drip Irrigation
Transplanting pumpkins into wheat stubble 2005
Example of a plot: Gold Medal, direct-seeded, 2005
Pumpkins after Wheat 2004

Weeds, especially common lambsquarters, were a major problem in 2004.
Pumpkins after Wheat 2005

Gold Medal - Seed

Magic Lantern - Seed

Gold Medal - Trans.

Magic Lantern - Trans.
Pumpkins after Wheat in N. Indiana
Yield of 8 Cultivars in 2004

Orange Pumpkin Yield (tons/acre)

Seed |
---|
Gold Standard | 0.6 |
Magic Lantern | 0.6 |
Racer | 0.2 |
Gold Gem | 0 |
REX 1003 | 0 |
Gold Medal | 0 |
ACX 510 | 0 |
REX 1002 | 0 |

Transplant |
---|
Gold Standard | 8 |
Magic Lantern | 8 |
Racer | 7 |
Gold Gem | 5 |
REX 1003 | 4 |
Gold Medal | 3 |
ACX 510 | 3 |
REX 1002 | 2 |
Pumpkins after Wheat in N. Indiana
Yield of 5 Cultivars in 2005

Orange Pumpkin Yield (tons/acre)

Seed

- Average: 4.7
- RPX 761: 6.4
- Magic Lantern: 4.2
- Gold Medal: 4.6
- RPX 771: 5.5
- RPX 089: 2.6

Transplant

- Average: 9
- RPX 761: 6.9
- Magic Lantern: 8.3
- Gold Medal: 7.1
- RPX 771: 5.9
- RPX 089: 4.1
With thanks to:
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Abbott & Cobb
Harris Moran
Rispens
Rupp
Seedway
Siegers