FIELD MANAGEMENT OF FORTRESS RUSSET FOR SUCCESSFUL TUBER YIELD AND QUALITY

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THANK YOU FOR THE SUPPORT
FORTRESS RUSSET (AC99375-1RU)

✔ PVY Resistant
✔ Can yield up to 500 cwt/Acre
✔ It is a large plant

⚠ Pay attention to field management
Each potato cultivar is unique in its N fertilizer requirement and N fertilizer application timing for maximum tuber performance.
NITROGEN APPLICATION RATE
EFFECT OF NITROGEN APPLICATION RATE ON TUBER YIELD OF FORTRESS RUSSET

<table>
<thead>
<tr>
<th>Nitrogen Application Rate (lb/Acre)</th>
<th>Tuber Yield (cwt/acre)</th>
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<tbody>
<tr>
<td>ON</td>
<td>TOTAL</td>
</tr>
<tr>
<td>60N</td>
<td>US#1</td>
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<tr>
<td>120N</td>
<td></td>
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<tr>
<td>180N</td>
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<tr>
<td>240N</td>
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<td>&gt; 6 oz.</td>
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(Soil + Irrigation Water Nitrogen = 20 lb./Ac.)
IN-SEASON NITROGEN MANAGEMENT
EFFECT OF NITROGEN APPLICATION RATE ON PETIOLE NITRATE-N CONCENTRATION OF FORTRESS RUSSET
EFFECT OF NITROGEN APPLICATION RATE ON TUBER SPECIFIC GRAVITY OF FORTRESS RUSSET
PRE-PLANT N APPLICATION RATE
Planted potato seed tuber takes 3 to 4 weeks before developing active roots that can feed on applied nutrients.

Until then, N applied pre-plant or at planting has the potential of being leached to underground and surface waters.
TREATMENTS

1. All Applied Pre-plant (All)
2. 66% Applied Pre-plant (66%)
3. 50% Applied Pre-plant (50%)
4. 33% Applied Pre-plant (33%)

Total Applied: 140 lb. N/Ac.
Effect of Pre-Plant Nitrogen Application Rate On Total Tuber Yield of Fortress Russet

![Bar chart showing the effect of pre-plant nitrogen application rate on total tuber yield.](chart.png)

- **Total Tuber Yield (cwt/acre)**
  - **ALL**
  - **33%**
  - **50%**
  - **66%**

The chart illustrates the yield in each nitrogen application rate category ('a', 'b') for different nitrogen percentages. Each color (red, yellow, green, orange) represents a different nitrogen application rate.
Effect of Pre-Plant Nitrogen Application Rate on Marketable Tuber Yield of Fortress Russet

Marketable Tuber Yield (cwt/acre)

- ALL
- 33%
- 50%
- 66%

Comparison of yield effects with different nitrogen application rates.
RESPONSE OF FORTRESS RUSSET TO PHOSPHORUS FERTILIZER SOURCE

- 10-34-0
- 9-24-3
EFFECT OF PHOSPHORUS FERTILIZER SOURCE ON TOTAL TUBER YIELD OF FORTRESS RUSSET
EFFECT OF PHOSPHORUS FERTILIZER SOURCE ON MARKETABLE (> 4 oz.) TUBER YIELD OF FORTRESS RUSSET