To Glean or Not to Glean

Updates on Citrus Mechanical Harvesting Research

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Take-Home Points

• Cost ($/bx) to glean > to hand pick.

• Glean IFF Del-in price sufficient.

• Separate gleaning cost from MH cost.
Glean > Hand-pick
Cost ($/bx) = pick + roadside

**Hand crew:**
10 bx/hr * $0.80/bx = $8.00/hr

**Glean crew:**
5 bx/hr * $1.60/bx = $8.00/hr
## Glean Cost, $f$(MH Recovery)

### Yield: 500 bx, Worker: $8/hr$

<table>
<thead>
<tr>
<th>MH Recovery</th>
<th>Remain Boxes</th>
<th>Worker Productivity</th>
<th>Harvest Piece Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>Bx/ac</td>
<td>Bx/hr</td>
<td>$/bx</td>
</tr>
<tr>
<td>80</td>
<td>100</td>
<td>7</td>
<td>$1.14</td>
</tr>
<tr>
<td>90</td>
<td>50</td>
<td>5</td>
<td>$1.60</td>
</tr>
<tr>
<td>95</td>
<td>25</td>
<td>3</td>
<td>$2.67</td>
</tr>
</tbody>
</table>
Glean IFF: Cost < Del-In Price

Example: ($1/ps, 5.75 ps/ bx)

Fruit value @ plant: = $5.75 / bx

- Haul charge = $0.75 / bx

Pre-glean value = $5.00 / bx

Pick < $2.50 / bx

Roadside < $2.50 / bx
“Net” Cost of MH

- Gleaning costs
- And/or value of abandoned fruit
Harvest with Gleaning

90% MH @ $1.15 /bx
10% Glean @ $3.00 /bx

$1.15 (0.90) + $3.00 (0.10) = $1.335 /bx

What is equivalent cost to Hand harvest?
Value of Abandoned Fruit

Value @ plant $5.75 /bx
- Haul charge $0.75 /bx
- Pick & Roadside $1.60 /bx

On-tree value $3.40 /bx

$1.15 (.90) + $3.40 (.10) = $1.375 /bx
Summary Comments

• Higher the MH recovery,
  – lower the gleaner productivity,
  – higher the cost to glean.

• Separate gleaning from MH costs.

• Glean only if cost < del-in price.

• Check out website:
  http://www.citrustool.ifas.ufl.edu/main.php