Evaluation of Blended Soilless Media/Poultry Litter Compost for Tobacco Transplant Production

Clint Hardy and Andy Bailey
Daviess Co. KY
2015
Blended Poultry Litter/Soilless Media
UKREC, Princeton KY - 2015

- Blend contained 5 gal composted chicken litter to 1 bag Carolina Choice media (approx. 50/50).

- 288-cell trays sown with KT D14 at UKREC, March 20:
  - 4 replications (trays) per treatment, randomized on float bed
    - Composted poultry litter/media blend
    - 100% media
    - 100% composted poultry litter

- Data collected:
  - Wicking (dry cells)
  - 24-day germination and spiral rooting
  - Dry weight of water roots, tray roots, and shoots from 10 randomly selected plants from center of each tray
Wicking (% Dry Cells)
Poultry Litter Compost Trial – UKREC, 2015

- All trays received light mist after 3-day and 4-day evaluations
- 100% compost never wicked (100% dry cells)

* = Statistically significant difference.
24-day Germination and Spiral Rooting
Poultry Litter Compost Trial – UKREC, 2015

% Germination and Spiral Rooting

- Compost/Media Blend
- 100% Media

% Germination:
- Compost/Media Blend: 78.6%
- 100% Media: 83.9%

% Spiral Rooting:
- Compost/Media Blend: 5.86%
- 100% Media: 1.12%
Dry Weights of Water Roots, Tray Roots, and Shoots

Poultry Litter Compost Trial – UKREC, 2015

No statistical differences in dry weights of roots or shoots.

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<thead>
<tr>
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<th>Compost/Media Blend</th>
<th>100% Media</th>
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<tbody>
<tr>
<td>Water Roots</td>
<td>0.68</td>
<td>0.66</td>
</tr>
<tr>
<td>Tray Roots</td>
<td>0.44</td>
<td>0.41</td>
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<tr>
<td>Shoots</td>
<td>3.11</td>
<td>3.4</td>
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Poultry Litter Compost Field Trial
Bernie Krampe Farm, Daviess Co. KY -2015

• Trays transplanted to field on June 6
  – 40” rows * 28” plant spacing (5601 plants/acre)
  – 2-row plots, 40 ft. long, 3 replications
  – Standard field practices used
  – Harvested September, Stripped November 12
No statistical differences between yield of compost blend- or media-grown plants.