Garlic Rust Fungicides and Coastal Allium Update

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Rust on garlic
2013 Fungicide trials

• Quilt / Toledo timing:
  – Quadris 12 fl oz. alternate w/ Toledo 6 fl oz
  – Start spraying early in March, April, or May
  – Spray at intervals of 2 weeks or 3 weeks
  – All applied with organic silicate adjuvant
  – Grower program: May 9 Quilt; June 6 Quilt + Toledo

• Experimentals, new products

• Evaluation: disease severity (0=good; 5=bad)
Set I, leaf 6

4 Quadris/Toledo, 2 wk, Apr start 0.3
6 Quadris/Toledo, 2 wk, May start 0.5
2 Quadris/Toledo, 2 wk, Mar start 0.6
3 Quadris/Toledo, 3 wk, Mar start 0.9
7 Quadris/Toledo, 3 wk, May start 1.0
8 Grower standard 1.0
5 Quadris/Toledo, 3 wk, Apr start 1.5
1 Untreated 3.8

LSD (P = 0.05) 0.95
Set II, leaf 6

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>2</td>
<td>Quilt Xcel 21 fl oz</td>
<td>0.1</td>
</tr>
<tr>
<td>13</td>
<td>Quash 4 oz</td>
<td>0.4</td>
</tr>
<tr>
<td>12</td>
<td>Quash 3 oz</td>
<td>0.8</td>
</tr>
<tr>
<td>5</td>
<td>A15457B 10.3 fl oz alt. Quilt 21 fl oz</td>
<td>1.1</td>
</tr>
<tr>
<td>4</td>
<td>A15457B 10.3 fl oz</td>
<td>1.2</td>
</tr>
<tr>
<td>3</td>
<td>A15457B 6.84 fl oz</td>
<td>1.5</td>
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<tr>
<td>7</td>
<td>Fontelis 1 pt</td>
<td>1.8</td>
</tr>
<tr>
<td>8</td>
<td>Fontelis 1.5 pt</td>
<td>1.9</td>
</tr>
<tr>
<td>9</td>
<td>Fontelis 1.5 pt alt. Bravo 2 pt</td>
<td>3.0</td>
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<tr>
<td>14</td>
<td>Merivon 4 fl oz</td>
<td>3.2</td>
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<tr>
<td>15</td>
<td>Merivon 5.5 fl oz</td>
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<td>6</td>
<td>Sonata 4 qts</td>
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<tr>
<td>11</td>
<td>OSO 13 fl oz</td>
<td>4.8</td>
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<tr>
<td>1</td>
<td>Untreated</td>
<td>4.9</td>
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<tr>
<td>10</td>
<td>OSO 6.5 fl oz</td>
<td>5.0</td>
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</tbody>
</table>

LSD (P = 0.05) | 0.69
Untreated control

Quash 3 oz
Untreated control

Exp15457 10.3 fl oz
Untreated control

Fontelis 1.5 pt
Untreated control

Sonata 4 qt
Garlic rust management

• Examine crop for early disease occurrence
• Note weather (temperature, leaf wetness)
• If rust develops late and weather is dry:
  – yield loss risk is reduced
  – Start sprays later? Use fewer applications?
• If rust develops early and weather is wet:
  – yield loss risk is increased
  – Start sprays earlier? Use more applications?
Acknowledgments

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• California Garlic and Onion Research Advisory Board

• Garlic rust task force

• Michelle LeStrange
Coastal Allium Diseases: News

• Iris yellow spot disease
  – *Iris yellow spot virus*
  – on onion, leek

• Fusarium crown rot
  – *Fusarium avenaceum*
  – on leek
Iris yellow spot virus (IYSV)

Onion photos: H. Pappu